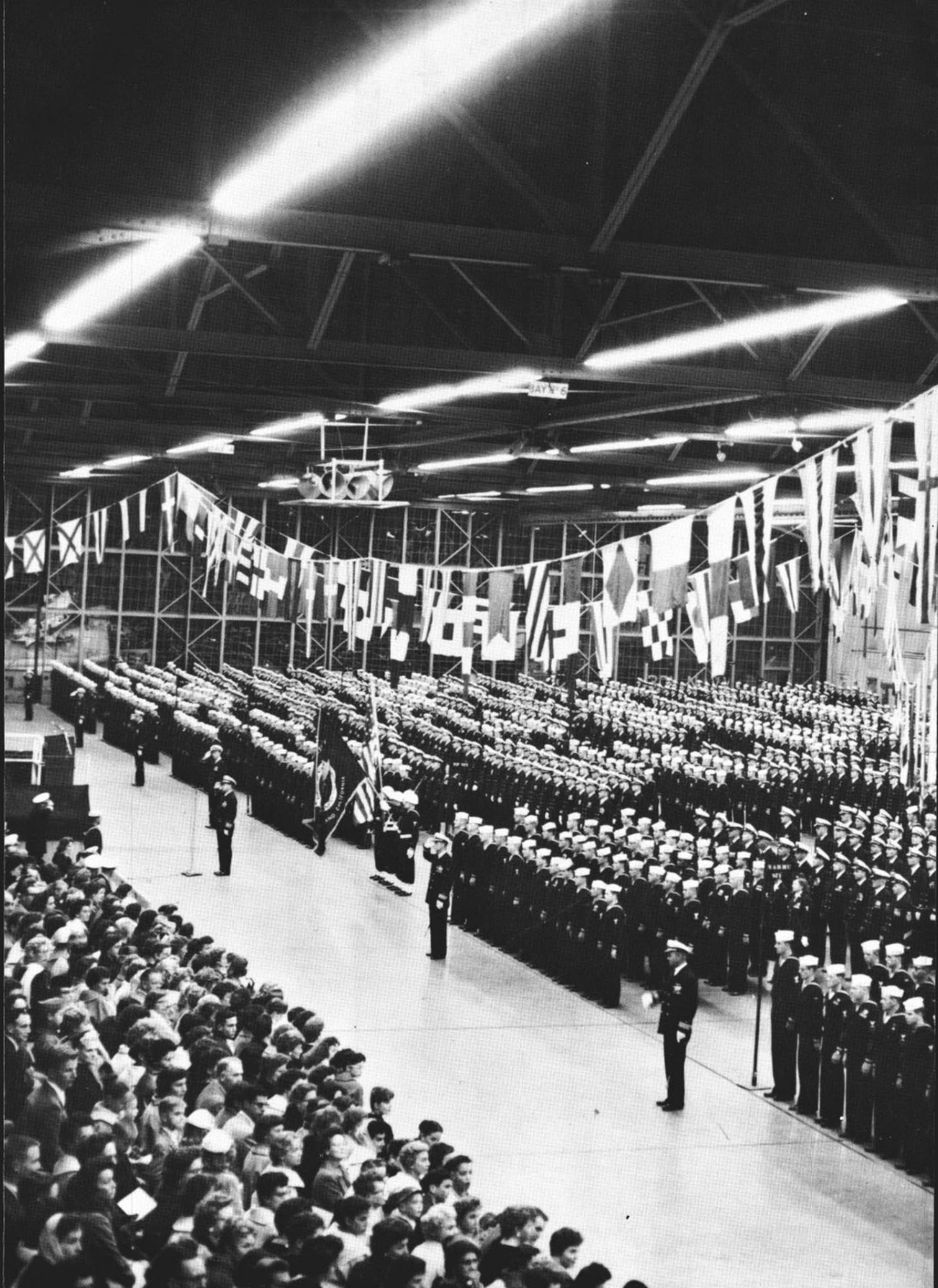
ALL HANDS

This magazine is intended for 10 readers. All should see it as soon as possible. PASS THIS COPY ALONG

FEBRUARY 1961



ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

FEBRUARY 1961 Nav-Pers-O NUMBER 529

TABLE OF CONTENTS

• **FRONT COVER: WIND WATCHERS—Helicopter flight deck officer checks wind speed with hand anemometer as crew member stands by to ready cruiser's whirlybird for a flight at sea.**

• **AT LEFT: FLYING FORMATION—Over 2500 Weekend Warriors from 32 Naval Reserve aviation units muster for inspection at Naval Air Station, Oakland, California.**

• **CREDITS: All photographs published in ALL HANDS are official Department of Defense photos unless otherwise designated.**

HERE WE ARE—QMs locate their cruiser's position on sea chart.

They Know Where They're Going

UP IN THE CHART

YOU'VE BEEN AT SEA for seven, eight, nine days. So far as you're concerned, the ship might as well be standing still, because one stretch of water has looked much like another. Then you get the word that landfall will be made in — say — six hours. And in just six hours, there it is. Right on the nose.

How is it done? It's not a miracle, of course. Just routine work by the Navigation Department. It has been doing it for years. Its job is highly technical, but no great mystery. Here's a capsule course:

One of the branches of navigation is *piloting*. Through this method, a ship's position is located by referring to objects and locations on the earth's surface. This type is basically similar to that used by a motorist driving through unfamiliar country. Equipped with a road map, common sense and fairly good eyesight, he can find his way without help from the local people.

IN PORT—Whitehat at the wheel keeps a sharp lookout steering into berth.

Another branch is *celestial navigation*. This is the out-of-sight-of-land type that calls for the use of accurate time pieces, a sextant, and mathematics. It's also called star navigation, for most of it is based on shooting heavenly bodies, such as sun, moon, stars and planets. It is with navigation of this type that we are primarily concerned.

WHEN A NAVIGATOR STARTS figuring the steps of a cruise—let's say from Norfolk to Dakar, on the west coast of Africa—he settles on a point of departure. Chances are it will be Chesapeake Lightship, which is anchored at the bay's entrance.

To get there, his ship first heads out of Norfolk Naval Base and follows the ship channel to the open sea. Through the use of piloting, the navigator and the special sea detail quartermasters measure with bridge instruments the ship's relationship to buoys, lighthouses and other seamarks and landmarks. In this way they keep an accurate check on the ship's position. Soon after leaving the buoy-marked channel the ship comes abeam of the lightship—which is the point of departure.

Two things happen at this time. The ship leaves close waters for the open sea and the QMs stow the channel charts and begin working with an ocean chart.

A chart is a representation of a section of the earth. But so is a map. However, a map is designed simply to be looked at, but a chart is intended to be worked on.

MOST OF THE NAVY'S CHARTS are based on the Mercator projection. These show a section of a curved surface even though they themselves are flat. This raises difficulties. On such a chart, the parallels of latitude and the meridians (longitude) appear at right angles to one another — and a constant course (rhumb line) appears as a straight line and crosses the parallels or meridians at the same angle. The chief drawback is that the farther north

or south you go the greater the distortion. Greenland, for example, looks larger than the United States—yet it isn't. Charts vary greatly in their scales. A printed sheet of paper the size of a newspaper can show the whole world (small scale) or merely a section of a harbor (large scale).

In the charthouse, the QM places the ocean chart on the chart desk. It is a small-scale chart that shows a good portion of the North Atlantic.

Along its left edge is the position of the Chesapeake Lightship which we mentioned, while along the right edge is a position off Dakar. The two are connected by a line. It is a rather unusual line in that it seems to curve. Actually the "curve" is made of six shorter straight lines joined together. This is one case where a straight line is *not* the shortest distance between two points. Although it is a curved line on the

HOUSE

Mercator chart, on a globe it would be a straight line—a line that shows the shortest path between the two points. Here is a situation involving the *great circle* business, which you may have heard about.

There is a course change for every 10 degrees of longitude, an average of every 555 miles in this case. The first course is 099 degrees; the third course is 111 degrees and the sixth course is 123 degrees. This last course ends about 30 miles northwest of Cape Verde, the best landmark in the area. From there it's just a few miles to Dakar, our destination.

The "curved line" on the ocean chart on the chart desk was laid out when our ship was still berthed back in Norfolk. (There is a bit of computation involved and the navigator and his assistants would have been too busy to undertake the job when piloting the ship down the channel.)

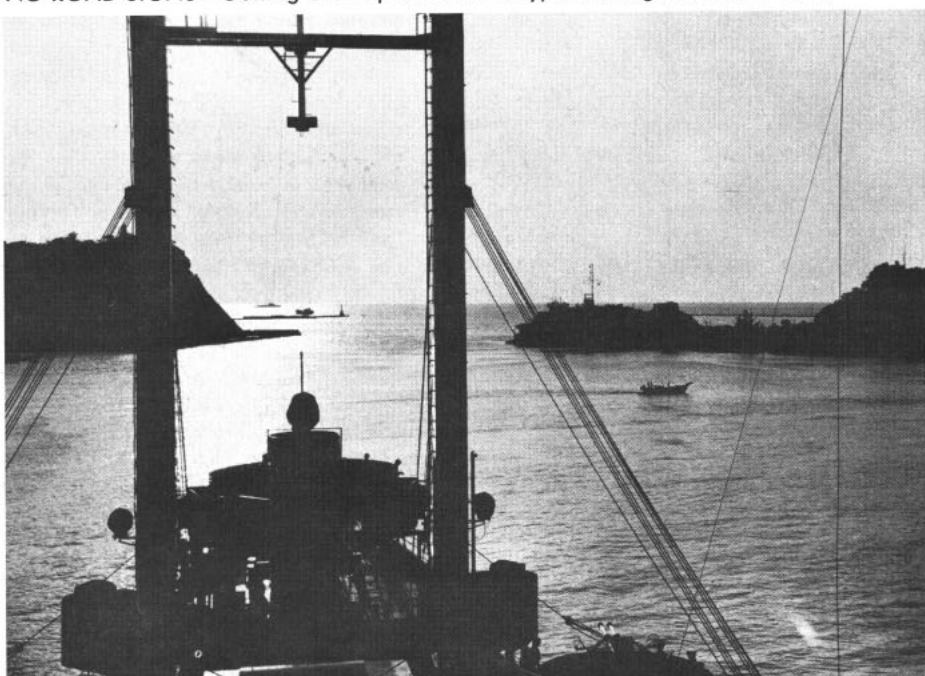
When the Chesapeake Lightship is abeam and the regular sea detail steersman is about to relieve the special sea detail steersman, a change of course to 099 degrees is ordered. We're navigating.

IN ALL NAVIGATION, the compass is perhaps the most important single instrument. The age of navigation didn't really begin until the magnetic compass was discovered (or rediscovered) in the thirteenth century.

Most of the Navy's current shipboard compasses are of the seven-and-one-half-inch variety. This compass has a liquid-filled, glass-topped brass bowl in which an aluminum card is pivoted. Below the card are magnets. The card-and-magnet assembly is provided with a central float or air chamber to ease the weight on the pivot. Older compasses used a fluid consisting of 45 per cent ethyl alcohol and 55 per cent water.

WHAT'S THE PLOT? — Course of *Independence* is checked by navigator.

NO ROAD SIGNS—Getting out of port is not easy, but navigators know how.



JOURNEY'S END—*USS Shenandoah* (AD 26) makes port at Barcelona, Spain.

Newer compasses use a petroleum distillate. A hollow cone extends into the underside of the float. The bottom of this cone is open; on its top there's a jewel bearing of synthetic sapphire. The card-float-magnet assembly rests on an osmium-iridium-tipped pivot at the jewel center. The pivot extends upward from the bottom of the bowl.

Though there is much to be said for the magnetic compass, its primary use in today's Navy is to provide a check on the accuracy of the gyro compass and as a standby in case the gyro breaks down or the ship loses its electrical power.

THE GYRO COMPASS introduced in the early years of this century, points to the earth's geographical north rather than to the magnetic north. It is not affected by variation and deviation, two factors that tend to pull the magnetic compass away from "true."

Briefly, the gyro compass makes use of gyroscopic principles, gravity, and the earth's rotation. It is a large device weighing several hundred pounds and is located deep in the ship.

The devices actually used for steering and for navigational purposes are the gyro compass repeaters. Located at various places on the bridge they show at a glance the ship's heading. Repeaters may also be located at other key positions in the ship.

ACCORDING TO THE BOOK, the navigator should have an easy time of it. Once the ship is on its course and with the ship's engines turning the screws at a specific speed, he could do some quick calculations and then turn into his bunk for a day or two. With specific RPM and distance known, he should, theoretically, know the precise day, hour and minute that the ship would reach the point for the next course change.

But there are a couple of items that show the big difference between theory and practice.

The ship is subject to currents, wind and the pounding of the seas; the compass may be off a slight and as-yet-undetected amount; a steersman may tend to steer to the right of the course.

The ship's bottom may be fouled more than is realized, which would slow up the ship.

The navigator can be sure only of one thing—the ship is NOT steadily heading for the precise point at the precise speed that he would like to assume it to be.

For another thing, *Navy Regulations* make the navigator responsible under the CO for the safe navigation of the ship; they require that he keep an accurate plot of the ship's position; and they require further that he report the ship's position to the CO, in writing, at least three times a day.

KEEPING A PLOT of the ship's position has the navigator hopping — and his number one assistant (usually the ship's leading quartermaster) is also plenty busy. This job has them turning to at odd hours.

Their at-sea routine is known as the day's work. One aspect of the day's work is the maintenance of a dead reckoning plot. Under favorable conditions the navigator gets a relatively accurate position (navigation is not an absolutely exact science) three times a day; morning star sights, noon sun, evening star sights. Through dead reckoning, the positions are carried forward on the chart by hourly positions. The effects of wind, current and seas are incorporated into the fix.

First step in the day's work is completed the previous evening. The time of sunrise is determined and, from this, the beginning of morning twilight. (Lengths of twilight vary greatly by latitude; shorter at the equator and longer in the higher latitudes.) Twilight is the important time, for only at twilight are both the horizon and the stars visible and it is necessary to see both in your sextant to get a workable star sight.

Also determined at this time (when most of the ship's company are at the movies) are the approximate positions of the navigational stars that will be visible at morning twilight. Of the thousands of stars in the skies, 57 of the brightest and best located are considered to be *navigational stars*. The QM determines their expected general altitude and azimuth by using a star finder, a circular star map with a rotating template.

THE NEXT STEP usually occurs well before reveille. Before sunrise the navigator breaks out his sextant, a highly precise optical instrument. With this he can accurately measure (to a fraction of a degree of arc) the height above the horizon of a heavenly body (altitude). The QM removes from the chronometer case a precision type pocket watch, the comparing watch. Then they both go out on the open bridge and start selecting stars to shoot.

Though they have a number of stars to choose from — those whose positions were obtained from the star finder the previous evening — only a small number of them will be shot. Listing positions of several stars has been a safety measure, for at star time many of them may be blocked out by clouds.

Under good conditions, shooting the stars can be done in a matter of 10 or 15 minutes. But with the stars almost blanketed by a heavy cloud cover it may be that they have to

wait a much longer time for stars to break through – and though they stay on the bridge until full daylight they may have obtained a quick shot at just one or two stars. Or they may not have seen any stars. Or it may be that stars were visible, but because of rain squalls or low-lying fog, the horizon could hardly be seen. It's largely a matter of luck and weather.

ONCE A STAR has been selected, the navigator frames it in the sextant's horizon glass and lines it up with the horizon, also framed in the glass. Stars, like the sun, rise and set; and just when he gets the star to appear as though it sits smack-dab on the horizon – which he does by gently adjusting the sextant arm – he says "Stand by . . . mark." The QM, his eyes on the comparing watch, notes the exact half second of the "mark" and writes it down in his Star Sight book. The navigator then calls off the reading on the sextant. Many navigators like to shoot five or six stars, if possible, and then work out the best three.

At this point the QM has notations in his Star Sight book which could be translated to read something like this: "Star – Deneb; Altitude – 32 degrees, 21.7 minutes; Time – 10 hours, 42 minutes, 33.5 seconds."

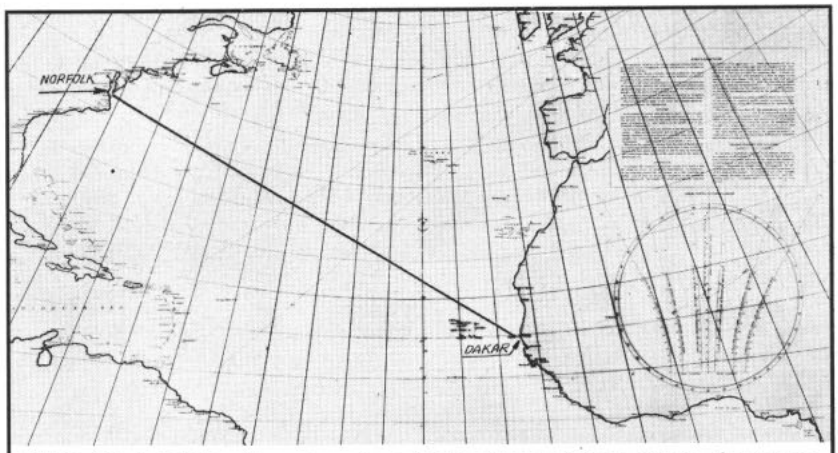
Returning to the charthouse, the QM checks the comparing watch against the ship's most accurate chronometer to determine the precision of the time recordings. The navigator, meanwhile, prepares to make corrective notations on the sextant readings.

NOW COMES THE COMPLICATED PART. Numerous books have been written on this subject and men have achieved fame for reducing the difficulty of the process. The two start working their sights. From the *Nautical Almanac*, a publication of the U.S. Naval Observatory, they obtain sextant corrections for height-of-eye (above the waterline) and for the star's observed altitude. Here, too, they obtain the star's declination (roughly, the angular distance of the star above or below an imaginary celestial equator), and secondly, they get figures for computing the star's "Greenwich Hour Angle" (roughly, the star's longitude).

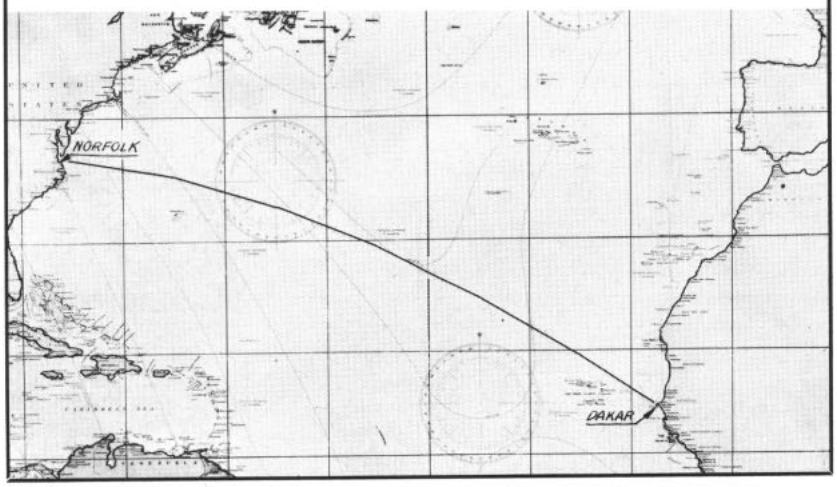
Now they are ready for another publication. This is H.O. Pub. No. 214, *Tables of Computed Altitude and Azimuth*. It comes in nine volumes, one for each 10 degrees of latitude. It contains figures that are, in a way, the end products of about three million computations of a rather involved problem in spherical trigonometry – namely, the solution of the navigational triangle. Old-time sailormen had to solve the triangle themselves.

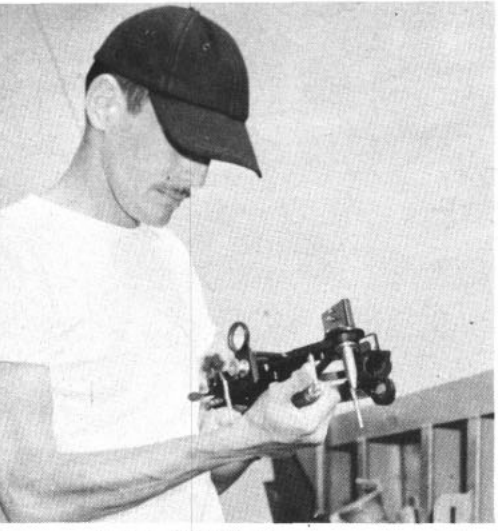
With three sets of figures at hand,

IN SIGHT—Bo'sun sights through cruiser's pelorus to find ship's bearings.



TWO OF A KIND—Mercator chart (bottom) and Great Circle charts are two types used by navigators to find the way across trackless oceans.





SURE SHOT—Quartermaster makes check on sextant after shooting the noon sun to fix destroyer's location.

the navigator refers to his H.O. Pub. No. 214. His own latitude (assumed to the nearer degree) is the first figure. The declination is the second and the hour angle is the third. (This last is arrived at after applying an assumed longitude to the previously mentioned Greenwich Hour Angle.)

These three factors point to two other major figures. The first shows what the star's altitude should be for the assumed position. The second major figure shows its azimuth.

By this time the navigator will have penciled in on a plotting sheet the ship's position — based on the assumed latitude and longitude.

Now we get to the heart of this matter. He then figures the difference between the sextant altitude of the star (as corrected) and the altitude of the star given in *H.O. Pub. No. 214.* This gives him a distance in miles and tenths. Then he plots an azimuth line, as taken from *H.O. Pub. No. 214,* starting from the assumed position. Next he steps off the mileage. Finally he draws a right angle line through the mileage position. This gives him the all-important LOP, the "line of position." At the time of that star sight, the ship was somewhere on that line.

He will then repeat this process for two or three other stars. As a result, he will have three or four lines that cross at a single point (if all goes exceptionally well). He thus has three or four LOPs, each supporting the other. Together they show where the ship was at the time of the star sights.

IN ACTUAL PRACTICE, the lines will probably not cross at a pinpoint. Instead they will shape up so that they enclose a relatively small area. The ship is assumed to be located somewhere in that area. A tolerance of one or two miles is allowed with star sight navigation — not an unreasonably large figure. The ship, after all, has the whole ocean in which to sail but the tolerance is much closer in piloting waters because an error of a few miles could run the ship aground.

It usually happens that the star sight is taken a few hours before 0800. Applying speed and course, the navigator then advances the position to 0800. This gives him the figures for the morning position report made to the CO.

Some time during mid-morning the navigator shoots the sun for a *sun line.* This process is similar to shooting a star, except that he uses the smoked glasses of his sextant. The computations are much the same as for star sights except that he has another computation that allows for the fact that the sun is not a mere pinpoint of light but is, instead, a sizable ball of light.

At noon comes a special step. Noon here is not "clock noon" but "true noon," the time when the sun reaches the highest point of the day. It is also the time when the sun is on the ship's longitude line (meridian). The navigator gets a check on the ship's latitude. This is done without the use of accurate time and is one of the oldest navigational practices still used. It forms the main basis of the 1200 report to the CO.

Along about mid-afternoon the navigator gets an afternoon sun line. Soon after this, the QM starts figuring time of sunset and time of evening twilight, and selects his stars from the star finder.

SOME 15 MINUTES AFTER SUNSET with the stars soon due to be visible, the navigator and QM go to the bridge for evening stars. Here they repeat, in substance, the procedure followed for the morning stars. The ship's position is computed to 2000, and the report sent to the CO. That completes the main portion of the navigational day's work, technically. Before securing from the charthouse, however, there is the matter of figuring sunrise and twilight times and star positions for the following morning.

From Norfolk to Dakar is a straight haul of some 3400 miles. At 15 knots, with no time out for radical changes of course and speed, it should be a run of about nine and one-half days. The navigational day's work, as briefly described here, will be repeated each of those days. Celestial navigation will be the order of the day until some sharp-eyed lookout sights the lighthouse at Cape Verde, Africa.

With shoreside objects and buoys beginning to appear, the special sea detail is called away and piloting is begun. The early birds will start getting ready for liberty.

—Bill Miller, JOCM, USN.

KEEPING TRACK—Navigator and quartermaster set up shop on open bridge.

HO THERE! H. H. Yoder, SM2, passes the word from tower to nearby ship.

Pearl Harbor Traffic Cops

WHEN 12 Navymen report for work as Pearl Harbor "traffic cops," there's little doubt they are alert. To reach their working area they must climb 273 steps to an elevation of some 185 feet.

And alert they must be, 24 hours a day, seven days a week. These men must watch each ship that enters or leaves the harbor area to make sure it observes the traffic laws. For one thing, the ships must not exceed six knots.

Each ship which desires to enter the harbor must secure permission from the Pearl Harbor Signal Tower. Many of the messages between tower personnel and the ships are passed by signal flags and signal lights. Eleven signalmen and one radioman are assigned to signal tower duty.

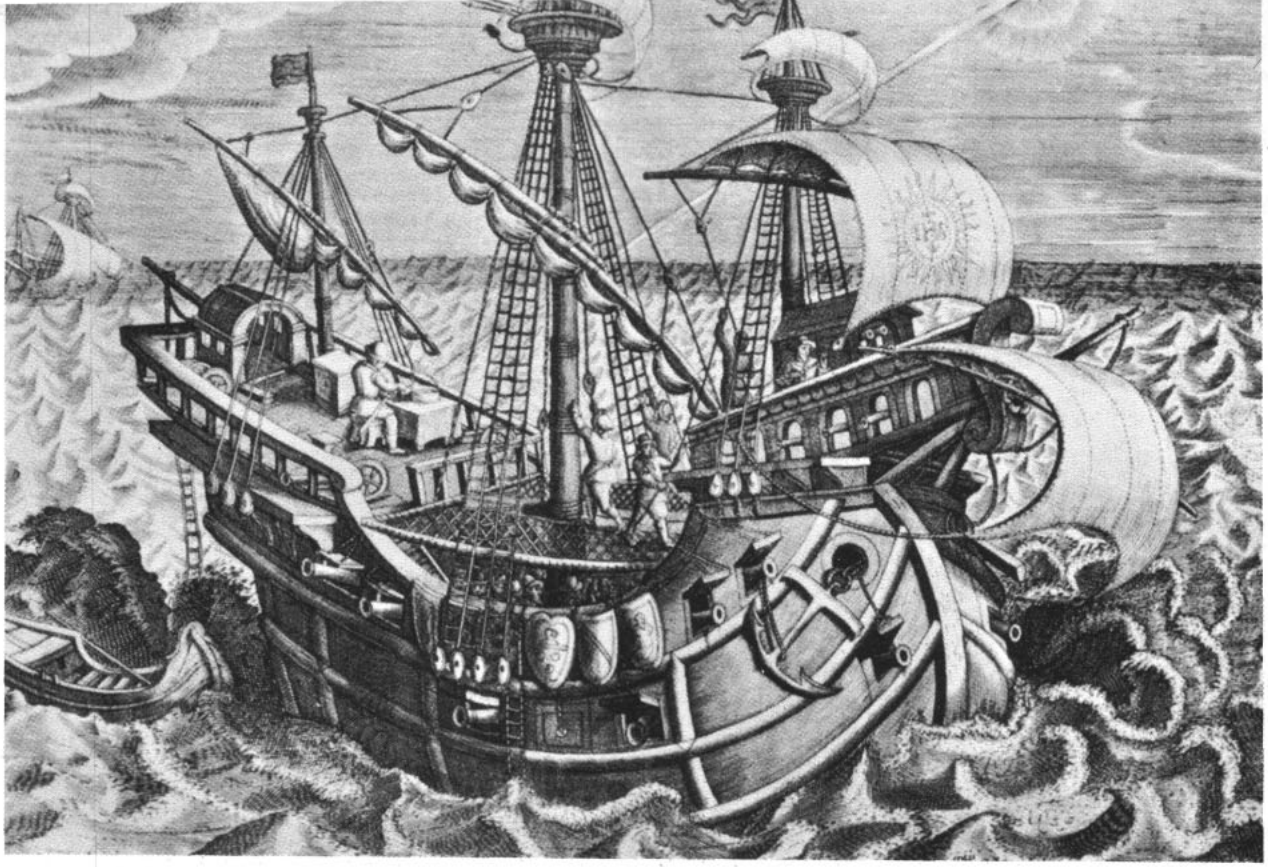
Besides regulating the ships, the men also pass on to them information about the location of supply docks, fuel docks and when asked, give weather information. In many respects they operate like any policeman on duty.

The present lofty signal tower is some three years old. It was built in 1958 at a cost of over 121 thousand dollars. Two earlier ones have also been erected at Pearl. One built in 1925 was destroyed by a hurricane, and a second was torn down and taken to another Pacific island.

The crew of three chiefs and nine whitehats assigned to the tower handle an average of 20 ships a day.

HEADQUARTERS — Channel policemen work tower overlooking harbor.

'CHIEF OF POLICE'—F. E. Kellington, SMC, scans harbor. *Rt:* D. L. Henderson, SM/SN, sends message to moored ship.



From Astrolabe to EPI—A SHORT

The tools and concepts used by today's navigators are the product of centuries of struggle, mistakes, trial and error and, eventually, a more practical means of operation. Here, briefly told, is the story of man's efforts to learn how to get from one point to another with a reasonable assurance of success.

In perhaps 6000 years—or is it 8000?—man has transformed the art of navigation almost into a science. At times it is easy to forget that it was ever anything else. Today, it is commonly thought that to navigate a ship one must have a chart to determine the course and distance, a compass to steer by, and a means of determining the positions of the ship during the passage. Not necessarily. The word "must" indicates how dependent the modern navigator has become upon the tools now in his hand. Many of the truly great voyages of history—voyages that made known much of the world—were made without one or more of these "essentials."

Nevertheless, because these tools are so important to navigation, its history is intimately connected with the development of such instruments.

TODAY THE NAVY FINDS its way through sea, air and space with apparently so little trouble that—to the uninitiated—modern navigation seems as absolute and exact as addition or subtraction.

Although the experts say there are still great advances to be made in navigation, those of us who get lost going around the block in a strange liberty port can't help but be impressed at the present-day navigator's ability to figure out where he is, even when he's many days and thousands of miles from anything familiar.

This art and science took thousands of years to reach its present level of accuracy and reliability. In fact, navigation is almost as old as man himself, since a form of land navigation took place when early man sighted on a familiar hill, tree or other landmark to find the way back to his cave after a hard day at the arrowhead factory.

Piloting, which also involves the use of landmarks as guides, was probably the first form of navigation to take to the water, and many centuries must have passed before the early sailors worked up the nerve to stay out of sight of land for very long. When they did, chances are they used an early version of dead reckoning to estimate where they were. Then they probably began to apply their knowledge of the winds, the sun and the stars.

AMONG THE EARLIEST TOOLS to be used by the navigator were charts and sailing directions, both of which date back centuries before the birth of Christ. (As the term implies, sailing directions are sets of instructions designed to give the navigator the information he needs on currents, depths, landmarks, safe courses and such in an area.)

Most of the very early maps were drawn without any sort of projection to take into account the curvature of the earth. The Babylonians, for instance, depicted the

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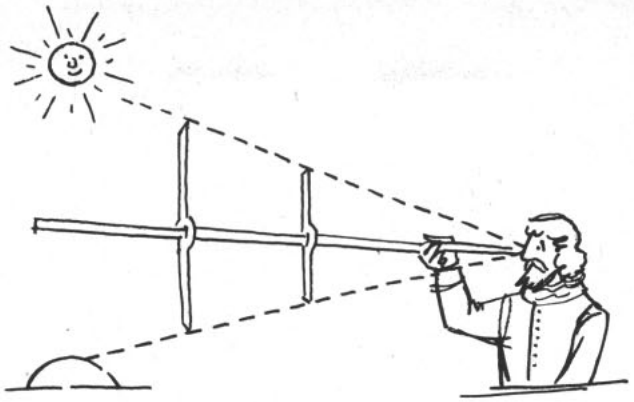
Freely arranged and condensed from Bowditch's *American Practical Navigator*, H. O. Pub. No. 9, U. S. Navy Hydrographic Office, 1958 edition, pp. 15-61.

HISTORY OF NAVIGATION

world as a flat disk, encircled by a river of salt water. However, learned men knew thousands of years ago that the world was a sphere, and by at least the third century B.C., its circumference had been quite accurately calculated.

As early as about 600 B.C., Thales of Miletus, chief of the Seven Wise Men of ancient Greece, is believed to have developed the gnomonic projection — still in use today on what are commonly called great circle charts because great circles appear as straight lines on them.

Stereographic and orthographic projections were also developed by ancient Greeks. Today, the stereographic projection is still used in charts of the polar regions and devices for mechanical or graphical solution of the navigational triangle. (This is a spherical triangle which is solved to compute altitude and azimuth and great circle problems.) The orthographic projection is now used mainly in navigational astronomy.



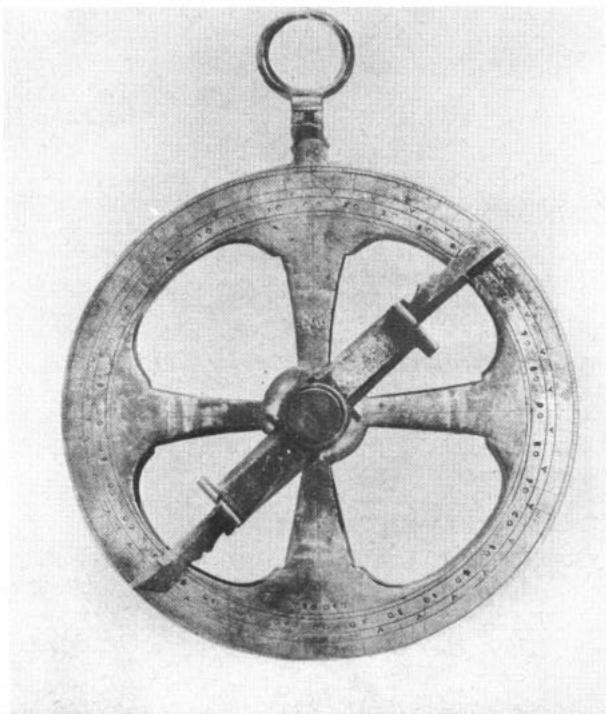
Sixteenth Century Navigator uses Cross-staff

In the Middle Ages the Portolan charts made their appearance. First drawn by Spanish seamen, they were based on the knowledge acquired by mariners in their travels around the Mediterranean. Some of their main features were a scale of miles, the locations of hazards to navigation and all sorts of notes of interest to pilots. Quite accurate for their time, they are considered forerunners of the harbor and coastal charts used nowadays.

Undoubtedly one of the most important single developments in the history of map-making was the Mercator projection. Published by the Flemish geographer Gerardus Mercator in 1569, this is the only cylindrical projection of the earth widely used in navigation. In the period when more and more "new" areas of the world were being discovered, this projection made it possible to show them all on a single flat surface in such a way that their relationship to one another could be accurately depicted.

AMONG THE BEST KNOWN of the early map-makers was Ptolemy, an astronomer, writer, geographer and mathematician of the second century A.D. He mapped the world on a conic projection, located some 8000 places on it by latitude and longitude, and started the practice of putting north at the top of the map. Although he used an estimate of the circumference of the earth which was short by almost 7000 miles, his work inspired that of the Persian and Arabian navigators during the Dark Ages.

WAY BACK WHEN—The ancient astrolabe was one of the earliest devices used to measure altitude at sea.

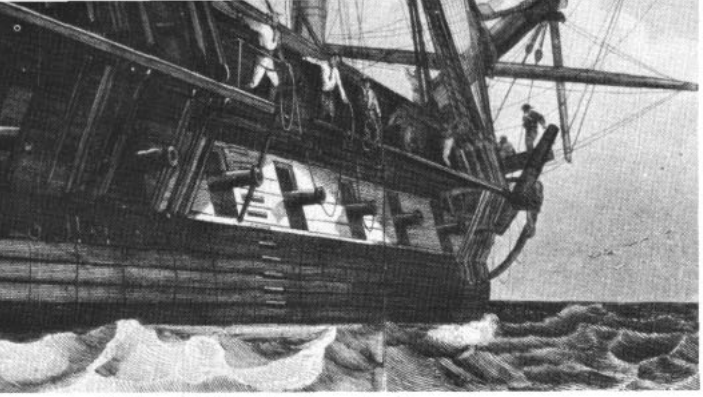


THE ORIGIN OF THE COMPASS is as obscure as the beginnings of map-making. We can assume, however, that early in the history of navigation, man noted that the pole star remained close to one point in the northern sky. This served as his compass. When it was not visible, he used other stars, the sun and moon, winds, clouds and waves. The development of the magnetic compass, perhaps a thousand years ago, and the 20th century development of the gyrocompass, offer today's navigator a method of steering his course with an accuracy as great as he is capable of using.

The magnetic compass is one of the oldest of the navigator's instruments. Its origin is not known. In 203 B.C., when Hannibal set sail from Italy, his pilot was said to be one Pelorus. Perhaps the compass was in use then; no one can say for certain that it was not. There is little to substantiate the story that the Chinese invented it, and the legend that Marco Polo introduced it into Italy in the 13th century is almost certainly false. It is sometimes stated that the Arabs brought it to Europe, but this, too, is unlikely. Probably it was known first in the west. The Norsemen of the 11th century were familiar with it, and about 1200 a compass used by mariners when the pole star was hidden was described by a French poet, Guyot de Provins.

A needle thrust through a straw and floating in water in a container, comprised the earliest compass known. A 1248 writer, Hugo de Bercy, spoke of a new compass construction, the needle "now" being supported on two floats.

THE RELIABILITY of the magnetic compass of today is a comparatively recent achievement. As late as 1820 Peter Barlow reported to the British Admiralty, "half of the compasses in the Royal Navy were mere lumber, and ought



HOW DEEP?—Uncharted channels were recorded by using time-tested lead line similar to present day version.

to be destroyed." Some 75 years ago Lord Kelvin (William Thomson) developed the type of compass used today.

The compass card, according to tradition, had its start about the beginning of the 14th century when a sliver of lodestone or a magnetized needle was attached to a card. But the rose on the card is probably older than the needle. It is the wind rose of the ancients.

The age of iron ships demanded a compass which could be relied upon to indicate true north at all times, free from the disturbing forces of variation and deviation.

In 1852, the first gyroscope, based upon the principle of a common toy then called a "rotascope," was developed by Leon Foucault. Handicapped by the lack of a source of power to maintain the spin of his gyroscope, Foucault used a microscope to observe the indication of the earth's rotation during the short period in which his manually operated gyroscope remained in rotation. A gyrocompass was not practical until electric power became available, more than 50 years later, to maintain the spin of the gyroscope.

Tested first in 1911 on a freighter operating off the east coast of the United States and then on U.S. Navy ships, the gyrocompass developed by Elmer Sperry became standard equipment on large naval and merchant ships after World War I.

Gyrocompass auxiliaries commonly used today were added later. These include gyro-repeaters, to indicate the vessel's heading at various locations; gyro-pilots, to steer vessels automatically; course recorders, to provide a graphic record of courses steered; gyro-magnetic compasses, which repeat headings of magnetic compasses so located as to be least affected by deviation; and other items in the fields of fire control, aviation and guided missiles.

SINCE VIRTUALLY THE BEGINNING of navigation, the mariner has attempted to determine his speed in traveling from one point to another. The earliest method was probably by estimate.

The oldest speed measuring device known is the Dutchman's Log. Originally, any object which would float was thrown overboard, on the lee side, from a point well forward, and the time required for it to pass between two points on the deck was noted. The time, as determined by sand glass, was compared with the known distance along the deck between the two points, to determine the speed.

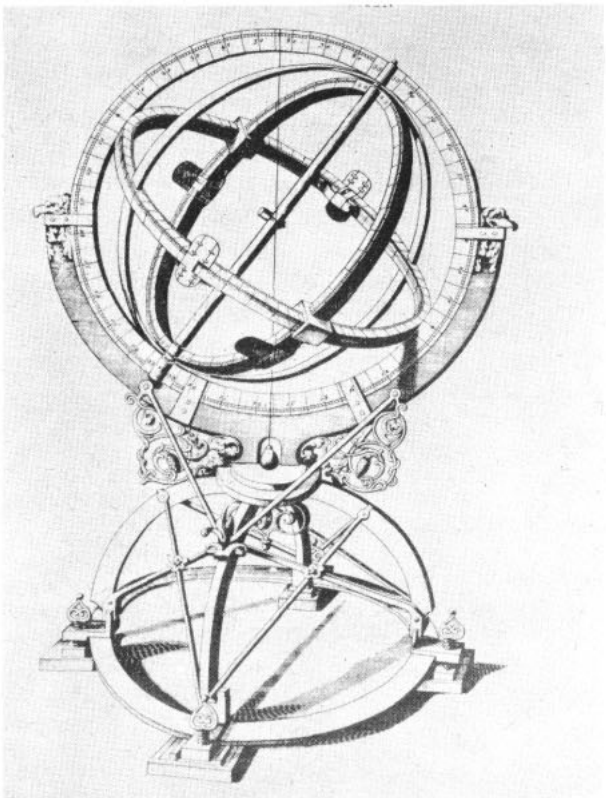
Near the end of the 16th century a line was attached to the log and as the line was paid out a sailor recited certain sentences. The length of line which was paid out during the recitation was used to determine the speed. There is record of this method having been used as recently as the early 17th century. In its final form this log consisted of a quadrant-shaped piece of wood weighted along its circumference to keep it upright in the water. The log line was made fast to the log chip by means of a bridle, in such a way that a sharp pull on the log line dislodged a wooden peg and permitted the log chip to be towed horizontally through the water, and hauled aboard. Sometimes a stray line was attached to the log to veer it clear of the ship's wake. In determining speed, the observer counted the knots in the log line which was paid out during a certain time. The length of line between knots and the number of seconds required for the sand to run out determined the speed.

The chip log has been superseded by patent logs that register on dials. However, the common log has left its mark on modern navigation, as the use of the term "knot" to indicate a speed of one nautical mile per hour dates from this device.

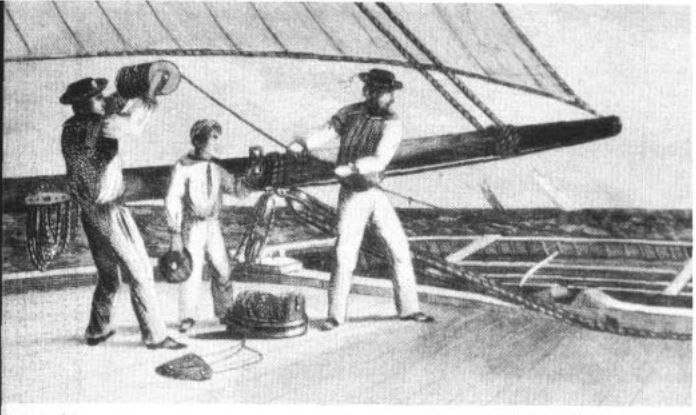
Mechanical logs first appeared about the middle of the 17th century. By the beginning of the 19th century, the forerunners of modern mechanical logs were used by some navigators, although many years were to pass before they became generally accepted.

In 1773, logs on which the distance run was recorded on dials secured to the taffrail were tested on board a British warship and found reasonably adequate. Another type in existence at the time consisted of a wheel arrangement made fast on the underside of the keel, which transmitted readings to a dial inside the vessel as the wheel rotated.

THE MODERN NAVIGATOR is concerned principally with three units of linear measure: the nautical mile, the fathom, and the foot (sometimes also the meter). Primi-



ROUND AND ROUND—Armillary sphere was principal instrument used by early astronomers to locate stars.



HOW FAST?—Old timers are shown paying out the log to find out how many knots their ship is sailing.

tive man, however, used such natural units as the width of a finger, the span of a hand, the length of a foot, the distance from the elbow to the tip of the middle finger (the cubit of biblical references), or the pace (sometimes one but usually a double step) to measure short distances.

As might be expected, these ancient measurements varied from place to place, and from person to person. One of the first recorded attempts to establish a tangible standard length was made by the Greeks, who used the length of the Olympic stadium as a unit called a stadium. This was set at 600 Greek feet (607.9 modern U.S. feet), or almost exactly one-tenth of a modern nautical mile. The Romans adopted this unit and extended its use to nautical and even astronomical measurements. The length of the stadium approximates the modern cable, a unit of 608 feet in the British Navy and 720 feet in the U.S. Navy.

The fathom as a unit of length or depth is of obscure origin, but primitive man considered it a measure of the outstretched arms, and the modern seaman still estimates the length of a line in this manner. Reference to the fathom is made in the detailed account of the Apostle Paul's voyage to Rome. Posidonius reported a sounding of more than 1000 fathoms in the second century B.C. How old the unit was at that time is unknown.

PROBABLY THE MOST DANGEROUS PHASE of navigation occurs when a vessel is "on soundings." Since man first began navigating the waters, the possibility of grounding his vessel has been a major concern, and frequent soundings have been the most highly valued safeguard against that experience. Undoubtedly used long before the Christian era, the lead line is perhaps the oldest instrument of navigation.

The hand lead, consisting of a lead weight attached to a line usually marked in fathoms, has been known since antiquity and, with the exception of the markings, is probably the same today as it was 2000 or more years ago. The deep sea lead, a heavier weight with a longer line, was a natural outgrowth of the hand lead. A 1585 navigator speaks of soundings of 330 fathoms, and in 1773, in the Norwegian Sea, Captain Phipps had all the sounding lines on board spliced together to obtain a sounding of 683 fathoms.

Matthew Fontaine Maury made his deep sea soundings by securing a cannon shot to a ball of strong twine. The heavy weight caused the twine to run out rapidly, and when bottom was reached, the twine was cut and the depth deduced from the amount remaining on the ball.

THE VARIOUS METHODS of determining course, distance, and position arrived at have a history almost as old as mathematics itself. Many men have contributed the formulas that led to the tables permitting computation of course and distance by plane, traverse, parallel, middle-latitude, Mercator and great circle sailings.

Based upon the assumption that the surface of the earth is plane, or flat, plane sailing was used by navigators for many centuries. The navigator solved problems by laying down his course relative to his meridian, and stepping off the distance run to the new position. This system is used with accuracy today in measuring short runs on a Mercator chart, which compensates for convergence of the meridians, but on the plane chart, serious errors resulted.

Because sailing vessels were subject to the winds, navigators of old were seldom able to sail one course for great distances, and consequently a series of small triangles had to be solved. Equipment was designed to help seamen in maintaining their dead reckoning positions. The modern rough log evolved from the log board, hinged wooden boards that folded like a book and on which courses and distances were marked in chalk. Each day the position was determined from this data and entered in the ship's journal, today's smooth log.

The log board was succeeded by the travas, a board with lines radiating from its center in 32 compass directions. Regularly spaced along the lines were small holes into which pegs were fitted to indicate time run on the particular course. In 1627, John Smith described the travas as a "little round board full of holes upon lines like the compasse, upon which by the removing of a little sticke they (seamen) keepe an account, how many glasses (which are but halfe houres) they steare upon every point of the compasse."

These devices were of great value to the navigator in keeping a record of the courses and distances sailed, but still left him the long mathematical solutions necessary to determine the new position. In 1436, what appears to have been the first traverse table was prepared by Andrea Biancho. Using this table of solutions of right-angled plane triangles, the navigator was able to determine his course and distance made good after sailing a number of distances in different directions.

PARALLEL SAILING was an outgrowth of the navigator's inability to determine his longitude. Not a mathematical solution in the sense that the other sailings are, it involved converting the distance sailed along a parallel (departure), as determined by dead reckoning, into longitude.

The inaccuracies involved in plane sailing led to the improved method of middle-latitude sailing early in the 17th century. A mathematician named Ralph Handson is believed to have been its inventor.

Middle-latitude sailing is based upon the assumption that the use of a parallel midway between those of departure and arrival will eliminate the errors inherent in plane sailing owing to the convergence of the meridians. The assumption is reasonably accurate and although the use of Mercator sailing usually results in greater accuracy, middle-latitude sailing still serves a useful purpose.

For many hundreds of years mathematicians have known that a great circle is the shortest distance between two points on the surface of a sphere, but it was not until the 19th century that navigators began regularly to make use of this information.

The first printed description of great circle sailing

BIG EYES—Even with today's navigational devices the Navyman's eye is used to help guide ship into port.

appeared in Pedro Nunes' 1537 *Tratado da Sphera:* The method had previously been proposed by Sebastian Cabot in 1498, and in 1524 Verrazano sailed a great circle course to America. But the sailing ships could not regularly expect the steady winds necessary to sail such a course, and their lack of knowledge concerning longitude, plus the necessity of stopping at islands along their routes to take on supplies, made it impractical for most voyages at that time.

The gradual accumulation of knowledge concerning seasonal and prevailing winds, weather conditions and ocean currents eventually made it possible for the navigator to plan his voyage with more assurance. Nineteenth century writers of navigational texts recommended the use of great circle sailing, and toward the close of that century such sailing became increasingly popular, particularly in the Pacific.

LITTLE CAN BE SAID with any assurance about early navigational practices because the vast majority of writers were landsmen with little interest or knowledge of manual or practical work. Technical processes were therefore of no interest to them, and when they wrote about the sea, it was from the theoretical viewpoint. Nearly all that has come down to us about seamanship and the seamen's problems has been written by passengers or scholars—not by the seamen themselves. For one thing, most seamen were illiterate and were much too busy with the practice of seamanship to be concerned with writing about it.

On the other hand, the astronomer was considered to be a magician and his instruments the means of magic practice. His elaborate and costly astrolabe, by which he read the skies, could not possibly be used by a pilot who, although he could barely perform the most elementary arithmetical problems, was still a superb sailor and knew his particular ocean as he did the streets of his home port.

Thus, navigation textbooks, as they are thought of today, are a product of the last several centuries. Until the end of the Dark Ages such books, or manuscripts, as were available were written by astronomers for other astronomers. The navigator was forced to make use of these, gleaning what little was directly applicable to his profession. After 1500, however, the need for books on navigation resulted in the publication of a series of manuals of increasing value to the mariner.

FREQUENTLY A COMMAND of Latin or other foreign languages was required to study navigation during the 16th century. *Regimento do Estrolabio e do Quadrante,* for example, which was published at Lisbon in 1509, or earlier, explained the method of finding latitude by meridian observations of the sun and the pole star, contained a traverse table for finding the longitude by dead reckoning, and listed the longitudes of a number of places. Nevertheless, the nameless writer of the *Regimento* performed a great service for all mariners. His "Handbook for the Astrolabe and Quadrant"—to translate the title—had many editions and many emulators.

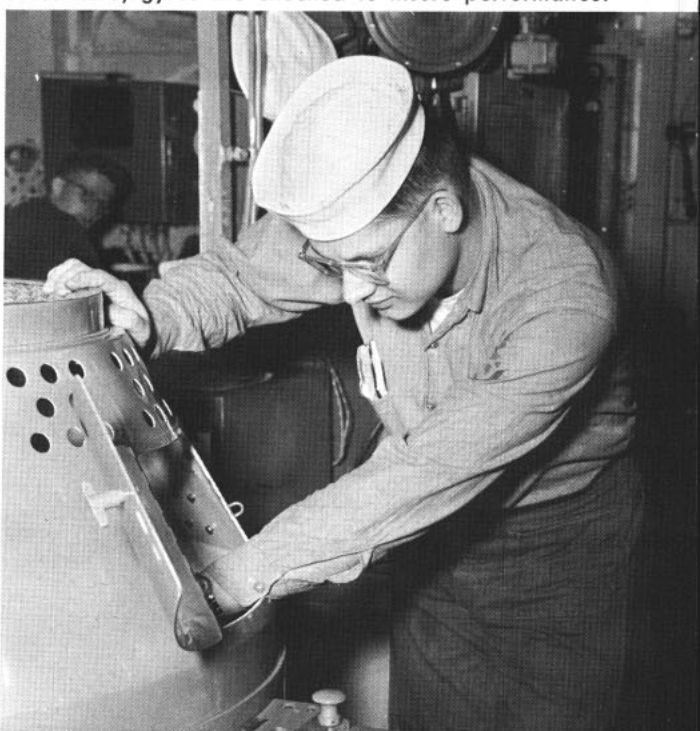
A Flemish mathematician and astronomer, R. Gemma Frisius, published a book on navigation in 1530. This manual, entitled *De Principiis Astronomiae,* gave an excellent description of the sphere, and discussed at length the use of the globe in navigation. Gemma gave courses in terms of the principal winds, proposed that longitude be reckoned from the Fortunate (Canary) Islands, and gave rules for finding the dead reckoning position by courses and distances sailed.

Pedro Nunes' great work, *Tratado da Sphera,* appeared in 1537. In addition to the first printed description of great circle sailing, Nunes' book included a section on determining the latitude by two altitudes of the sun and solving the problem on a globe.

During the years that followed, an extensive navigational literature became available. The Spaniards Pedro de Medina and Martin Cortes published successful manuals in 1545 and 1551, respectively. Medina's book passed through 13 editions in several languages and Cortes' book was eventually translated into English and became the favorite of British navigators. Cortes discussed the principle which Mercator used 18 years later in constructing his famous chart, and he also listed accurately the distance between meridians at all latitudes.

Diego Garcia de Palacia published the first western hemisphere manual at Mexico City, in 1587. His *Instrucion Nauthica* included a partial glossary of nautical terms and certain data on ship construction.

UPKEEP—Today's navigational instruments need expert care. Here, gyros are checked to insure performance.



THE SEAMAN'S SECRETS of 1594, by John Davis, was the first of the "practical" books. Davis was a celebrated navigator who asserted that it was the purpose of his book to give "all that is necessary for sailors, not for scholars on shore."

Davis' book discussed at length the navigator's instruments, and went into detail on the "sailings." He explained the method of dividing a great circle into a number of rhumb lines, and the work he had done with Edward Wright qualified him to report on the method and advantages of Mercator sailing. He endorsed the system of determining latitude by two observations of the sun and the intermediate bearing.

Although best known for the presentation of the theory of Mercator sailing, Edward Wright's *Certaine Errors in Navigation Detected and Corrected* (1599) was a sound navigation manual in its own right. Particularly, he advocated correcting sights for dip, refraction and parallax.

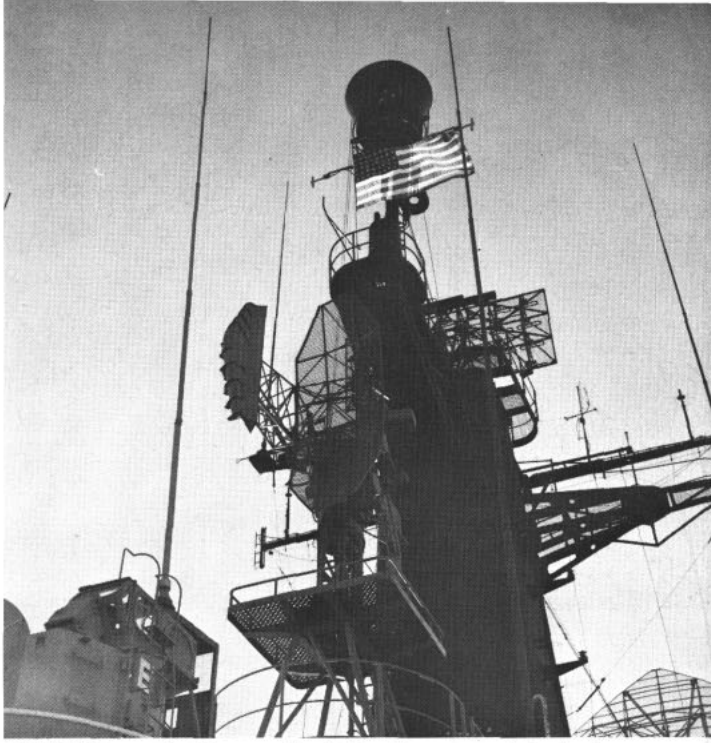
The next 200 years saw a succession of manuals made available to the navigator. Among those which enjoyed the greatest success were Blundeville's *Exercises,* John Napier's *Mirifici Logarithmorum Canonis Constructio* (which introduced the use of logarithms at sea), the tables and rules of Edmund Gunter, *Arithmetical Navigation* by Thomas Addison, and Richard Norwood's *The Sea-mans Practice* (which gave the length of the nautical mile as 6120 feet). Robert Dudley filled four volumes in writing the *Arcano del Mare* (1646-47) as did John Robertson with *Elements of Navigation.* Jonas and John Moore, William Jones and at least two named "Samuel Dunn" were others who contributed navigation books before Nathaniel Bowditch in America and J. W. Norie in England wrote the manuals which navigators found best suited to their needs. This list just touches on the names of some of the early navigation experts. There were others who played important roles too.

BOWDITCH'S *The New American Practical Navigator* was first published in 1802 and Norie's *Epitome of Navigation* appeared the following year. Both were outstanding books which enabled the mariner of little formal education to grasp the essentials of his profession. The Englishman's book passed through 22 editions in that country before losing its popularity to Captain Lecky's famous *Wrinkles in Practical Navigation* of 1881. The *American Practical Navigator* is still read widely, more than a century and a half after its original printing.

Navigation has come a long way, but there is no evidence that it is nearing the end of its development. Progress will continue as long as man remains unsatisfied with the means at his disposal.

Perhaps the best guides to the future are the desires of the present, for a want usually precedes an acquisition. Ancient sailors undoubtedly dreamed of devices to indicate direction and distance. The 16th century navigator had these, and wanted a method of determining longitude at sea. The 18th century navigator could determine longitude, but found the task a tedious one, and perhaps longed to be freed from the drudgery of navigation. The modern navigator is still seeking further release from the work of navigation, and now wants to be freed from the limitations of weather.

There is little probability of further major development in the simplification of tables for celestial navigation. Further release from the work of navigation is more likely to come through another approach—automation.



COMPLEX navigation and electronic gear of today's ships is exemplified by antenna-studded superstructure.

IN THE FUTURE, it is likely that electronics will be applied increasingly as an additional source of energy to extend the range of usefulness of other methods, rather than to replace them. To date, electronics has been related primarily to piloting, extending its range far to sea, and permitting its use in periods of foul weather. In the future it can be expected to play an increasingly important role in the field of dead reckoning and celestial navigation.

It is not inconceivable that a fix may someday be automatically and continuously available, perhaps on latitude and longitude dials. However, when this is accomplished, by one or a combination of systems, it will be but a short additional step to feed this information electronically to a pen which will automatically show a ship's track.

When this has been accomplished, new problems will undoubtedly arise, for it is not likely that the time will ever come when there will be no problems to be solved.

ACROSS THE BLUE—Ship's position is plotted on chart by quartermaster (rt) using automatic drafting machine.

GREEK GREETINGS—Little village of Spata turned out a royal welcome for visiting cruisermen of USS *Canberra* (CAG2).

A Visit to Spata

How do you hammer nostalgia into words? How do you capture the moment when people clasp hands in warm friendship which spans centuries and oceans? How do you describe the impact of spontaneous trust, which needs no language to communicate itself?

You can't really describe any of these emotions. You feel them, see them, experience them, but you never once express them as they deserve expression. You never could relate them as they actually happened – as they happened in Spata, Greece.

U.S. DISH—Hot dogs and hamburgers made big hit with Greek friends.

Spata is a village outside Athens. A village of grape-laden vines, where ordinary people live. They court, marry, and die as quietly as they have lived, with their days dotted by little excitement except village fiestas and holidays.

Spata was the kind of town *Canberra* men envisioned when they devised Project Hinterland. They had already greeted thousands of visitors throughout the world and demonstrated the ship's missile system to seaport dwellers from Sydney to Singapore. Everywhere enthusiasm had run high, welcomes had been wonderfully cordial, officers and men had been entertained and had entertained.

Istanbul had been the most recent port of call for *Canberra*, with Athens yet to go, before the homeward voyage to end the around-the-world trip begun so many months before.

What would be a fitting climax for this cruise? Seek out a village? Break out a band and dance in the streets? Hand out hot dogs and hamburgers, chewing gum and cokes? After 50,000 miles of "people-to-peopleing," this might have sounded like utter nonsense to some ships, but not to the men of *Canberra*. "Let's do it," was their reply.

Hinterland was underway.

Spata was the selected village, but practically no one there spoke any English. Had the whole idea been a bit hasty? Would it have been better to visit Athens proper on a normal liberty, and then shove off without any excess bother?

Canberra arrived in Athens on a Sunday morning and by 3:00 p.m. the commanding officer, Captain W. H. Baumberger, USN, a handful of officers, and some 100 enlisted men climbed into cars and buses for the trip to Spata. Foodstuffs and band instruments were loaded on a truck. There was little fiesta spirit evident as the caravan got underway. They were still not sure this had not been a mistake.

As they neared the village, someone stopped them and asked them to give the villagers 10 minutes notice.

Again they waited. Curiosity mounted. Then people outside the first few houses began to wave their welcomes. And suddenly the church bells began to ring wildly, in a welcome that rolled in a thousand echoes through the valley.

This was Spata: Streets lined, banners waving in painful English "Wel-

come to our town," warm, delighted cheers, smiles of joy.

Next came the speeches, but they proved secondary. Welcome ran through the handshakes of the hundreds who reached out eagerly to greet the Yanks. Welcome lined the streets, and was re-echoed in the countless greetings.

After visiting Spata's factories and its historic church, everyone returned to the village square where the CRULANT Band was already playing. But much to the surprise of *Canberra* men, the tables were set and succulent-looking lambs were turning slowly in spits. *Canberra* had planned to entertain a village, but the village had planned otherwise.

However, hot dogs and hamburgers made a rather unusual dessert after roast lamb, and added a true touch of America to Greek pastry.

Even after this, the Navy bluejackets were not to be outdone. The costumed young girls were asked to line up. And then, much to the delight of the townspeople, the CRULANT Band broke into native Greek dance music, and the girls showed a delightful display of Greek dances. This repaid the band members who had lost many hours of sleep learning to play the unfamiliar Greek music.

Later, after a speech by the mayor, the commanding officer of *Canberra* spoke to the people in Greek.

All that remained was for the *Canberra* sailors to ask the village girls to dance. The permission of the mayor was sought and gladly granted. The waltz and cha-cha were attempted, as well as Greek folk dances.

Bright sunlight finally yielded to shadows and then to soft darkness which signalled the departure of the *Canberra* crewmen. But this was not the end of their relationship with this little town. Tomorrow the townspeople would visit *Canberra*.

When the next afternoon came, *Canberra* men were determined to welcome their guests royally.

The mayor and a representative handful of villagers, embarked in the captain's gig, were the first to arrive. Solemnly, His Honor came aboard, doubtful that hundreds of sailors of one of the mightiest American warships would line up on deck in their best dress blues to greet the hardly known mayor of an out-of-the-way town in the hinterland of Greece. He struggled to hold back the tears.

One hundred and twenty-five villagers followed—those chosen by their fellow townsmen to represent all of them.

SHOW TIME—Navymen played Greek music and girls performed folk dances.

There were speeches again and some shyness and awkward moments as efforts were made to pick up threads laid down the night before.

Then there were growing smiles and warmth, as those who had visited Spata the day before now became hosts. The CRULANT Band and *Canberra's* own combo gave out with music.

The visitors were shown the ship's missile system and then taken to the general mess for a thoroughly American dinner. While cutting a cake which had been decorated in Greek letters, the mayor pronounced his first English words: "God bless you all."

After dinner hosts and guests congregated on the foc'sle for more music. *Canberra's* glee club, a feature of the evening before in Spata, gave an encore on home territory.

Before the visitors departed, *Canberra's* Greek-speaking sailor, Yeoman Pappas, of CRUDIV Six's staff, announced the presentation of a substantial supply of scientific equipment, purchased in Athens for use of Spata's schoolchildren. The mayor's words of acceptance seemed significant: "Perhaps one day the children of our village, having used this equipment, will grow up to become skilled scientists, and work side-by-side with the scientists of the United States, in the cause of peace."

These were not merely Greek villagers returning to their own little town, they were friends saying goodby. Hands were not shaken, they were clasped, held tight, pressed with warm fervor. A near-miracle of friendship had taken place in hardly 48 hours. Hinterland was no longer a project – it was an experience in friendship.

—LCDR J. J. O'Connor, CHC, USN.

GREEK DISH—Villagers surprised *Canberra* sailors with feast of roast lamb.

Navy's Top Leaders

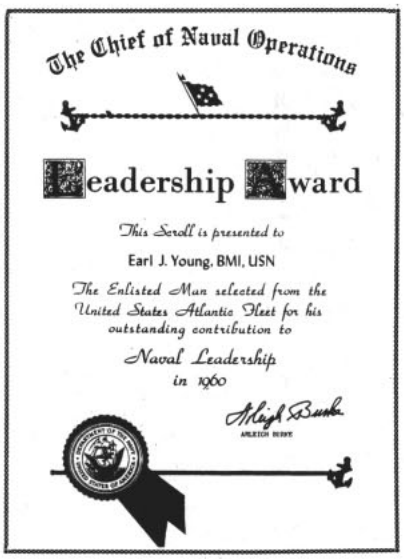
A BOATSWAIN'S MATE FIRST CLASS who is first lieutenant on board an escort vessel, a chief aviation electronics technician on duty in Japan, a commanding officer of an escort vessel, and an aircraft handling officer on an aircraft carrier were the winners of the first annual Chief of Naval Operations Leadership Award.

Here's the story of the brand-new award, how to qualify for it, and a little about the first group of men who did qualify for it.

The Pacific Fleet winners were ***William J. Hawkins, ATC, USN,*** General Maintenance Chief of Air Transport Squadron 21 Detachment, Japan, and ***LCDR Rembrandt C. Robinson, USN,*** Commanding Officer of uss *Charles Berry* (DE 1035).

In the Atlantic Fleet, ***Earl J. Young, BM1, USN,*** First Lieutenant aboard uss *Huse* (DE 145), and ***LCDR Philip R. Craven, USN,*** of Carrier Air Group Six, formerly Aircraft Handling Officer aboard uss *Randolph* (CVS 15), were selected.

When announcing these winners, Admiral Arleigh A. Burke, CNO, called the men "living examples of what makes our Navy the finest fighting force in the world."



WILLIAM J. HAWKINS, ATC, top enlisted leader in the Pacific Fleet, directs an on-the-job training program and encourages self-study. Sixty per cent of those in his group who participated in the service-wide examination for advancement in rating and in proficiency pay examinations last year were advanced in rating or to pro-pay status.

The disciplinary rate in Hawkins' shop has decreased from three cases in 1958 and 1959 to none in 1960. He is also credited with rehabilitating one man who had an acute alcohol problem.

It is routine for Chief Hawkins to ask that chronic or potential troublemakers be assigned to his division.

LCDR Robinson, on board *Berry,* has set up an extensive leadership program for his ship. Both his junior officers and petty officers actively participate in the program.

Since November 1959, 27 of 28 men have reenlisted or extended their enlistments on board, and the only *Berry* Reserve officer eligible for separation throughout the year applied for and was accepted into the Regular Navy. Also during this period, only one man was tried by court-martial. One of LCDR Robinson's superior officers said, "The leadership program on board *Berry* has generated a spirit of enthusiasm in the officers and crew that is the envy of all who come in contact with the ship."

LCDR Robinson's leadership isn't limited just to shipboard activities. Members of the crew — officers and men — are motivated, and they demonstrate it while they are ashore. After a visit to Japan recently, the ship reported "no single adverse incident."

Commander Destroyer Flotilla One made this comment about LCDR Robinson in connection with his nomination for the CNO Leadership Award: "DO NOT HAVE STATISTICS ON ENLISTMENTS BUT CONDUCT RECORD PERFECT X . . . DYNAMIC LEADERSHIP OF LCDR ROBINSON . . . HAS CARRIED OVER TO EVERY OFFICER AND PETTY OFFICER OF HIS COMMAND."

THE ATLANTIC FLEET'S top enlisted leader is boatswain's mate first class Earl Joseph Young, USN, First Lieutenant and First Division Officer, aboard uss *Huse* (DE 145).

Young has been able to maintain the deck spaces and sides of the ship in a high state of repair and cleanliness despite a lack of funds and personnel. The following are comments which reflect Young's leadership ability in this area: "The excellent material condition of the ship noted on your departure inspection is a tribute to fine leadership and hard work."

When this Reserve Training ship arrived at its new duty station in the Eighth Naval District, the Commandant said, "I was most favorably impressed by the alert and smart appearance of officers and men. The cleanliness and shipshape conditions were apparent throughout the ship."

Huse's commanding officer said this about Young: "He is not content merely to promote his own division and department; he has gone much farther to promote a harmonious and cooperative spirit among all departments and divisions. This cooperative spirit has greatly increased the morale as a whole aboard *Huse.*"

Mast cases have been reduced to zero in Young's unit. He has also taken an active part in the ship's leadership improvement program, in addition to overseeing the training program for the Naval Reserve personnel who come aboard.

LCDR Philip R. Craven, USN, was the Atlantic Fleet's officer selectee for the Leadership Award. Although currently assigned to Carrier Air Group Six, much of 1960 was spent as Aircraft Handling Officer, with collateral duty as Air Department Training Officer, aboard uss *Randolph* (CVS 15).

During the time on board *Randolph,* the ship was redesignated CVS. ASW operations presented an entirely different concept of flight deck procedures which had to be accomplished with fewer, and therefore more highly trained, men. It was a tough new assignment.

He studied the procedures of other CVSs, adapted his own ideas and personal experiences and then instituted, through his division officers, a training program designed to meet the new requirements.

★ ★

"HE MOLDED THIS VESSEL'S aircraft handling group (some 500 men) into a closely knit, highly efficient professional group whose performance of mission is unparallelled," his commanding officer said.

During LCDR Craven's tour of duty in *Randolph*, the ship won the following awards:

1959 – Battle Efficiency Award (for CVA), Battle Efficiency Award for the Air Department (for CVA), and Marjorie Sterrett Award for the "Best Ship in the Fleet."

1960 – Battle Efficiency Award (for CVS), Air Department Efficiency Award (for CVS), Admiral Flatley Memorial Award for Aviation Safety (for CVS), and the ASW "A" (for CVS).

His own department, which had only 16 per cent of the total crew assigned, accounted for 23 per cent of the reenlistments for the entire ship. When he left the ship, even though he was not a division officer, the enlisted men who worked for him organized a farewell ceremony. "He was simply and genuinely well liked," commented the ship's commanding officer.

ATLANTIC FLEET runners-up were:

• **CDR Paul Hannon, USN,** Commanding Officer, USS *Dyess* (DDR 880) – His ship won the Battle Efficiency "E" Award for fiscal year 1960. Commander Destroyer Squadron Six said in a letter of commendation to CDR Hannon: "Your performance throughout the year has been so outstanding as to cause me to recommend your ship for a bonus of five points in the Fleet Competition."

After a recent inspection of *Dyess*, the inspecting officer noted: "The over-all individual pride in the ship was reflected throughout the inspection in the appearance, attitude and can-do spirit which pervaded every department."

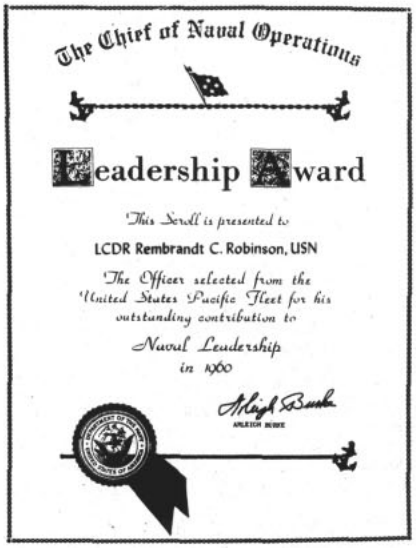
During the last year, more than 50 per cent of those who took the pro-pay test made it (26 of 50 men), more than half who took the February advancement examination passed (55 of 99), and about the same percentage of those eligible to reenlist, reenlisted (6 of 13).

• **LCDR Shepherd M. Jenks, USN,** USS *George Washington*, SSB(N) 598 – During the last year and a half, LCDR Jenks has trained simultaneously, two engineering crews. Each of these crews can maintain and operate the nuclear power plant, and the complete electrical, interior communications and control systems of the Fleet Ballistic Missile submarine. During the training period the men worked long hours, many times seven days a week.

Despite this, within his department, there has been a 100 per cent reenlistment rate and officer retention rate, no requests for transfer, and no courts-martial. Discipline is excellent.

The records of his department show that 95 per cent of those men who took the examination for advancement in rating were advanced during the last one and one half years.

• **CDR George J. Davis, USN,** Commanding Officer USS *Blandy* (DD 943) – During fiscal year 1960, his ship has won the Battle Efficiency "E"; Engineering Department Excellence "E"; Operations Department Excellence "E"; Communications Department Excellence "E"; Antisubmarine Warfare Excellence "A"; and Rhode Island Council of the Navy League Best ASW Ship in the Destroyer Force, U.S. Atlantic Fleet Award. *Blandy* is also authorized to display the Gunnery "E" on the main battery director and on the three five-inch mounts.



Before CDR Davis took command, the only award that had been won by the ship was one Engineering "E."

Commander Destroyer Squadron 24 made this comment about CDR Davis: "It is unusual that during his tour approximately eight officers have been qualified to moor the ship alongside a pier, and all eligible officers have been qualified to get the ship underway, and to make approaches alongside other ships while underway. Although he performs the more difficult shiphandling maneuvers himself, he is careful to insure that all officers have ample opportunity to perfect their technique."

• **LCDR Robert Y. Kaufman, USN,** Commanding Officer, USS *Cavalla* (SS 244) – Since he took command, the reenlistment rate (first cruise) has increased from eight per cent (1 of 12) to 50 per cent (5 of 10).

He talks with each prospective dischargee. In addition, he writes to the wife or parents about three months before the husband or son is discharged, and again about a month before discharge.

Once a month he talks with leading petty officers, and leadership is always among the items stressed.

Since LCDR Kaufman has been in command of *Cavalla*, there have been no disciplinary cases, no shore patrol reports, and no traffic violations among *Cavalla* personnel.

• **Alfred Zulueta, SD1/AT, USN,** Airship Squadron Three—Zulueta is squadron section leader, crew chief, and leading electronics shop petty officer. "In each position," his commanding officer relates, "he has received verbal commendations from many officers who work with him."

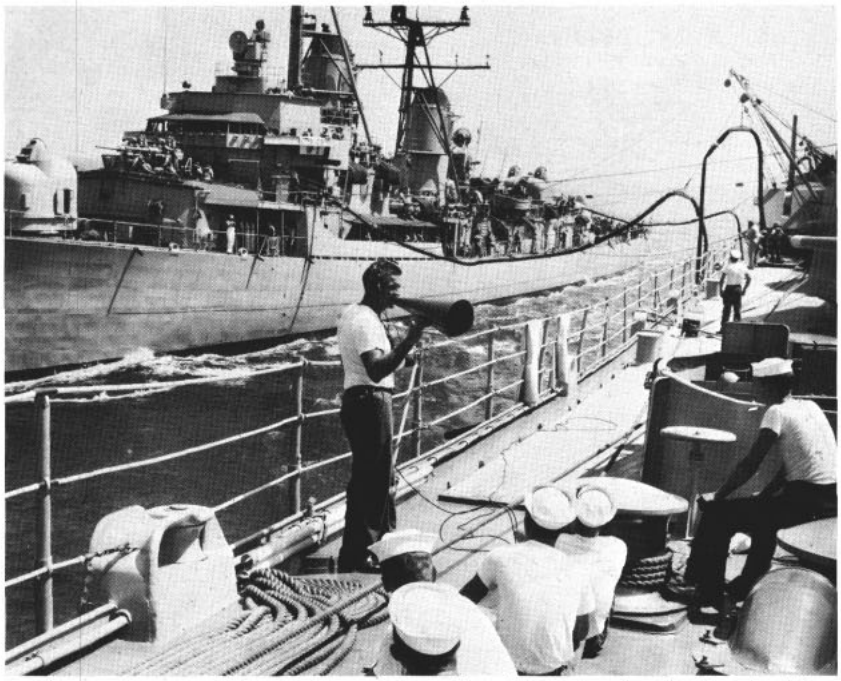
Zulueta is also the only qualified communications aircrewman in the U.S. Navy, according to his squadron, who holds the SD rating. His flight crew has more qualified designated aircrewmen than any other squadron in his group.

He has trained his crew of technicians and supervised their in-flight maintenance procedures until they have achieved "an unparalleled ability" to keep the electronics equipment operating.

• **Harold G. States, BM3, USN,** USS *Norris* (DDE 859)—On board *Norris*, States has acted as petty officer-in-charge of after fueling station; coxswain of captain's gig; boatswain's mate of watch, and repair party investigator.

During a recent refucling-at-sea operation, the chief observer commented: "All phases of this exercise were conducted by *Norris* in an out-

★ ★



THE CNO AWARD will be presented annually to Navymen showing leadership.

standing manner. It was the smoothest destroyer refueling operation witnessed by this observer during the entire Mediterranean cruise."

The commanding officer of *Norris* has made the following comments about States: "It is a pleasure to watch him generate spirit and enthusiasm in the men who work for him. He is an expert lookout instructor and has done much to increase the capabilities and interest of the ship's lookouts. States has a forceful personality and gives orders in a direct military manner. He has no trouble getting men to work because they respect him as a leader."

He has been awarded several letters of commendation for leadership.

• ***Paul D. Grimes, EOC-P1,*** USN, Underwater Demolition Team 21—During a training exercise in 1959, Chief Grimes was deployed as Officer-in-Charge of the Underwater Demolition Team 21 detachment. For his work with this detachment, he was commended by Commander Amphibious Group Four.

In July 1960, Chief Grimes attended the Atlantic Amphibious Force's Leadership Academy. He stood first in his class in Academics, Student Performance Evaluation, Instructor Performance Evaluation and Final Course Grade. He was also chosen Honor Student from among the 40 CPOs in his class.

After completing the course he assumed a leading role in the UDT 21 leadership program. He is a member of the Leadership Advisory Board which is responsible for making recommendations and carrying out leadership policies of the command.

In this capacity he has scheduled and monitored weekly lectures and discussion periods which cover such topics as adherence to regulations, importance of security, voting obligations and privileges, moral aspects of leadership and communism.

• ***William E. Bennett, BMC-P1,*** USN, Commander Mine Sub-Division Bravo and Captain of the Squadron Flag Boat, MSB 29—"Chief Bennett's selection as boat captain was based upon his leadership ability to obtain outstanding results," volunteered one of his senior officers.

Previously, he has commanded an MSB and a group of six MSBs. Later, he was put in command of a sub-division which was deployed to the U.S. Sixth Fleet in the Mediterranean. There were no disciplinary cases while in the Med.

In August 1960, Chief Bennett "exhibited outstanding qualities of leadership and knowledge" while engaged in salvage operations of a minesweeping boat.

PACIFIC FLEET runners-up were:

• ***James S. Black, ETC,*** USN, USS *Hancock* (CVA 19)—Soon after he reported aboard, Chief Black organized a training program and became its principal instructor. He devoted many off-duty hours to preparing and conducting the program.

He and his group contributed directly to the winning of the Battle Efficiency Pennant for fiscal year 59, reports his commanding officer.

In addition, the advancement rate of ETs in his division has increased from 61 to 78 per cent. Four men have been rated ET3 during 1960 without attending Class "A" school.

There have been only two mast cases in his group in two years. Much of the credit for this goes to Black's active participation in the ship's naval leadership program.

• ***MSGT Louis Frederick, USMC,*** Platoon Sergeant of the Weapons Platoon, Company H, 2nd Battalion, 19th Marines, Third Marine Division (Rein.), Fleet Marine Force, Pacific—Since his assignment to his present company, he has formed and trained a weapons platoon from a nucleus of semi-experienced men. He has encouraged his men to complete their education through USAFI courses and to become more proficient in their work. His commanding officer said: "His leadership, ability, and personal example have influenced and assisted the average Marine to become an asset to the platoon and company.

MSGT Frederick's platoon has the lowest offense rate and is reported to be the best disciplined platoon in the company.

• ***Charlie B. Holsclaw, BMC,*** USN, Chief Master-at-Arms and Leading Boatswain, USS *Interpreter* (AGR 14)—Only one member of the ship's company has been court-martialed since the ship was commissioned in September 1958.

Chief Holsclaw, himself, has had 11 commendatory entries in his service jacket since he reenlisted in March 1956.

One commendation says: "He has given full attention to his individual responsibilities without, in any way, losing the overview as to what is best for his ship and for the Navy. He has exercised mature judgment in every instance and his unique ability to instill confidence in young inexperienced junior officers in a diplomatic manner, has resulted in their rapid qualification in all phases of seamanship."

Another commendation said, "Your keen sense of responsibility and the strong leadership qualities you continually displayed were of the high-

est order, enabling you to provide highly effective assistance in the maintenance of the highest standards in the Deck Department."

• ***Ronald E. Williams, ENCM(SS), USN,*** Chief-of-the-Boat, USS *Seadragon,* SS(N) 584—Master Chief Williams has taken a leading role in *Seadragon's* leadership program.

His commanding officer describes him as a "leader of leaders" and as "the cleanest, smartest-looking person on board, and as fine a man in every respect as the commanding officer has ever known."

He is one of the few enlisted men in the Navy qualified as Engineering-Officer-of-the-Watch of a nuclear power plant. During a recent 11,000-mile voyage under the North Pole, Chief Williams was one of three persons who acted as Engineering-Officer-of-the-Watch.

The Engineering Department has a 100 per cent reenlistment rate.

• ***CDR John S. Bailey, USNR,*** Executive Officer, USS *General William Mitchell* (T-AP 114)—He personally supervises the leadership instruction program aboard his ship. Also, in the absence of a Protestant chaplain, he has organized, and conducts Protestant religious services on board with steadily growing attendance.

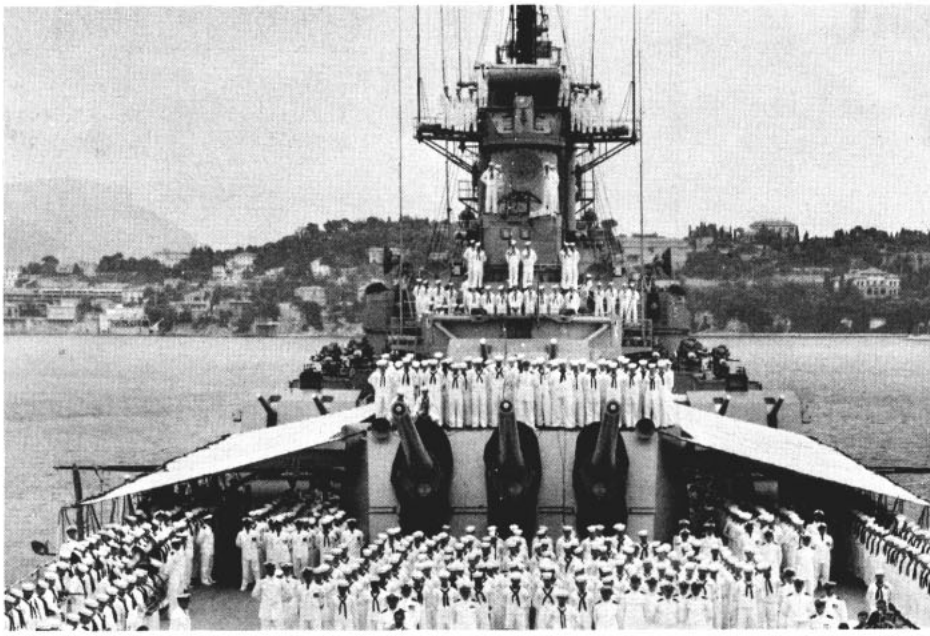
He has been able to obtain the complete cooperation of both enlisted men and officers by personal example and interest. He has also made certain changes in the ship's organization which have resulted in more efficiency, fewer disciplinary problems and higher morale among the ship's company.

• ***Chief Boatswain Alan B. Davis, USN,*** USS *Mathews* (AKA 96)—Under the leadership of Chief Boatswain Davis, new men become competent line handlers, cargo handlers, winch operators, boat crews and all-round good seamen.

CWO Davis' commanding officer said: "Whether rough seas or darkness . . . Chief Boatswain Davis' men confidently handle their 30-ton boats and various cargoes like true craftsmen.

"Junior officers are eager to stand watch under his direction and look to him constantly for example and advice in their efforts to become leaders in their own right."

• ***LT Stanley G. Rice, USN,*** USS *Hornet* (CVS 12)—When LT Rice took over his division, mast cases averaged four per month for the 50-man group. Through lectures, inducements in the form of additional privileges, and his personal good example, mast cases were cut to only two in the six-month period of March to August 1960.



HERE'S WHO—Five EMs and five officers from each Fleet can be nominated.

During the last months of a recent deployment, his division was depleted to 39 men, yet he managed to cope with all operational demands and, at the same time, maintained an enviable safety record.

• ***LTJG O. L. Morrison, USN,*** USS *Cook* (APD 130)—LTJG Morrison has headed several departments in the ship.

From July 1958 until August 1959, he was assigned as Navigator. He raised the Navigation Department from a satisfactory state to an outstanding one.

In August he became First Lieutenant and Gunnery Officer. At that time morale and performance were low in that department. He revised this trend and raised the state of these departments to a high excellent.

In August 1960 he became Operations Officer, and he has already taken steps to improve the state of readiness there as he has in the other departments.

Besides these primary jobs, LTJG Morrison has acted as information and education officer, athletic officer, special services officer, library officer and public information officer. As an example of his production in his collateral duty assignments, during a period of one year, more than 600 PIO releases were made.

THE CNO LEADERSHIP AWARD will be presented annually to officers and enlisted men who demonstrate superior naval leadership. The award consists of a scroll suitable for framing and a service record notation.

A maximum of five officers (not above the rank of commander) and five enlisted men (any rate) from each Fleet may be nominated, and only men from Fleet units are eligible. Nominations, together with substantiating documents, must reach the Chief of Naval Personnel by 1 November of each year.

The Chief of Naval Operations has established the following criteria for nominations.

The candidate must have:

• Demonstrated achievement in the unit in which assigned.

• Been directly responsible for improvements of his unit over a period of time.

• Demonstrated leadership qualities which are reflected in such areas as reenlistment rate, officer retention rate and improvements in discipline.

• Clearly demonstrated adherence to, and complete understanding of, the highest moral principles as set forth in General Order 21.

These outstanding leaders, along with the many others throughout the Fleet, who were not nominated, have made the Navy's Leadership Program work. It will only continue to work so long as each individual whitehat, chief and officer works hard at it.

—Erwin A. Sharp, JOC, USN.

BIG WELCOME—Reserve PubRel units can help spread the word to news media when your ship returns to home port.

Public Relations Experts

YOUR SHIP HAS just been eased into her berthing space at the Boston Naval Shipyard. You've got almost two weeks to kill before getting underway again for ASW exercises.

Word is passed to report to the exec. You're on the staff of the ship's paper, and wonder what you did wrong in the last issue.

Soon you find that the "Old Man" didn't blow his stack because of the typographical errors. But he did get wind of a training course in public information which coincides with the layover. So you, other men on the ship's paper and your division officer —who has collateral duty as PIO and adviser to the ship's paper—get a chance to take this one-week course.

The public information course is conducted by Naval Reserve Public Relations Company 1-1, Boston. Training is supervised and administered by experts in the field of public relations who are members of the company. But more about this course later.

This training project is but one of many ways in which Naval Reserve Public Relations Companies stand ready to help you and your ship. These units have a twofold mission: First, of course, they train public information specialists for mobilization billets. Second, and more important to you and your ship, they provide assistance to district commandants in carrying out the Navy's public information program.

HERE ARE SOME WAYS the Reserve PubRel units can help you:

Suppose your ship is returning from a long cruise and wants to stage a homecoming celebration. A PubRel unit can assist in getting prominent local officials to take part. It can line up TV, radio and newspaper coverage. It can probably provide photographic coverage so your ship can have a pictorial souvenir of the event.

Maybe you are planning a cruise book. A PubRel company can help with data on your ship's history to provide flavorful background material. It may also help you plan and execute the cruise book itself.

Perhaps your ship has been on a pioneering mission to an out-of-the-way area. A PubRel unit can help you publicize the operation (if the mission isn't classified, of course).

PubRel companies offer orientation programs to Navymen assigned in their area. They arrange public appearances for senior officers. They see to it that a Navy human interest story gets coverage. And so on, and on.

THE PUBLIC RELATIONS program is one of the 21 programs within the Specialist Reserve. More than 700 Reservists—all experts in the field of mass communications—take part in the training. Among these specialists are writers, editors, reporters, photographers, artists, advertising consultants, publishers, radio, and television and motion picture staff members.

Men and women may join PubRel units. There are no rank restrictions for officers. Enlisted Reservists in pay grades E-1 and E-2 are not eligible for membership, however.

PubRel units vary in size from a minimum of five members to more than 70 members. There are 39 Public Relations Companies operating throughout the country. They are

located in Boston, Mass.; New York City, Albany and White Plains, N.Y.; Stamford, Conn.; Philadelphia, Pa.; Cleveland and Columbus, Ohio; Richmond and Norfolk, Va.; Louisville, Ky.; Washington, D.C.; Atlanta, Ga.; Miami, Fla.; New Orleans, La.; Lubbock, Dallas, Austin, Houston and Corpus Christi, Tex.; Chicago and Springfield, Ill.; St. Louis and Kansas City, Mo.; Milwaukee, Wis.; Detroit, Mich.; St. Paul, Minn.; Topeka, Kans.; Denver, Colo.; San Diego, San Francisco and Los Angeles, Calif.; Phoenix, Ariz.; Seattle, Wash.; Portland, Oreg.; Oklahoma City, Okla.; Indianapolis and Fort Wayne, Ind.

A minimum of 24 and a maximum of 48 drills—without pay—are authorized annually. Active duty for training (ACDUTRA), with or without pay, is also authorized annually, subject to the availability of funds and billets.

Training includes lectures, seminars, and instruction in current planning and policies of armed forces public relations.

SEA TO SHORE—NR/PR units can help provide advice and assistance in planning community relations for special projects such as ASW exercises.

BUT PUBREL RESERVISTS don't spend all their time in classrooms or lecture halls. A great part of their time is devoted to learning by doing—or sharing the skills and know-how they have already acquired.

Here are a few projects members of PubRel companies have carried out in recent months:

• Members of one unit conducted a "public relations clinic" for Task Group BRAVO, Atlantic Fleet. Their job was to provide advice, counsel and assistance in planning and implementing an effective public relations and community relations program for USS *Wasp* (CVS 18) and other BRAVO ships taking part in ASW exercises.

• A Reserve public relations expert spent his annual ACDUTRA period on Staff COMSIXTHFLT, preparing a history of the Sixth Fleet from the time it was established until the present—including examples of Fleet activities, exercises, emergency operations, state visits, cruises, VIPs and so on. He also helped prepare a 36-page brochure, "Building Good Will."

• One unit has been preparing, writing and recording a weekly five-minute radio program of Naval Reserve news for broadcast over a local radio station. Members take turns handling the project, which has been in operation for a number of years.

• PubRel Company 11-2, Los Angeles, launched a cruise for high school journalists four years ago. The teenagers spend "A Day in the Navy" and then write of their experiences for their school papers. A prize is awarded for the best article. The project proved so successful that it has become an annual event, and units in other parts of the country have sponsored similar activities.

• Public Relations Company 9-2, Chicago, set up a "command information bureau" which coordinated all news releases and public relations activity in the Great Lakes area for Task Force 47's *Operation Inland Seas* during the summer of 1959. Last year, as a result of this project, the Navy was awarded the coveted "Silver Anvil Award" by the American Public Relations Association for the best public relations program of the year in the "military" category.

THE PUBLIC RELATIONS course offered in Boston, mentioned earlier, is an-

LAND CRUISE—Columbus, Ohio, Naval Reserve PubRel unit bids farewell to Explorer Scouts leaving for tour of Naval Academy arranged by the PR unit.

BIG JOB—Reserve units helped cover opening of St. Lawrence Seaway. *Rt:* Type of project NR/PR can help with.

other example. The course is designed for completion in one week and the trainee may return to his ship or station each night. The curriculum has been kept flexible so that the background and goals of each trainee may be given consideration.

A typical week's course runs something like this:

Monday AM: Instruction in news editing, advertising, composition, printing and distribution, carried out in a newspaper office.

Monday PM: Indoctrination at Boston University's School of Public Relations and Communications.

Tuesday AM: Big-town newspaper operations covered. Trainee rewrites news releases, rides in radio car to get first-hand information on news-gathering techniques.

Tuesday PM: A session in the photo department of a major newspaper; trainees learn how to set up news and publicity shots.

Wednesday AM: A look into the public information activities of a government agency.

Wednesday PM: Training in the role of wire service activities.

Thursday AM: Radio and TV indoctrination, including spot announcement writing, script writing and news writing.

Thursday PM: Another trip to a metropolitan newspaper for review purposes.

Friday AM: A visit to a large advertising agency. Emphasis is on the layout, promotion and techniques involved in long-range PR projects.

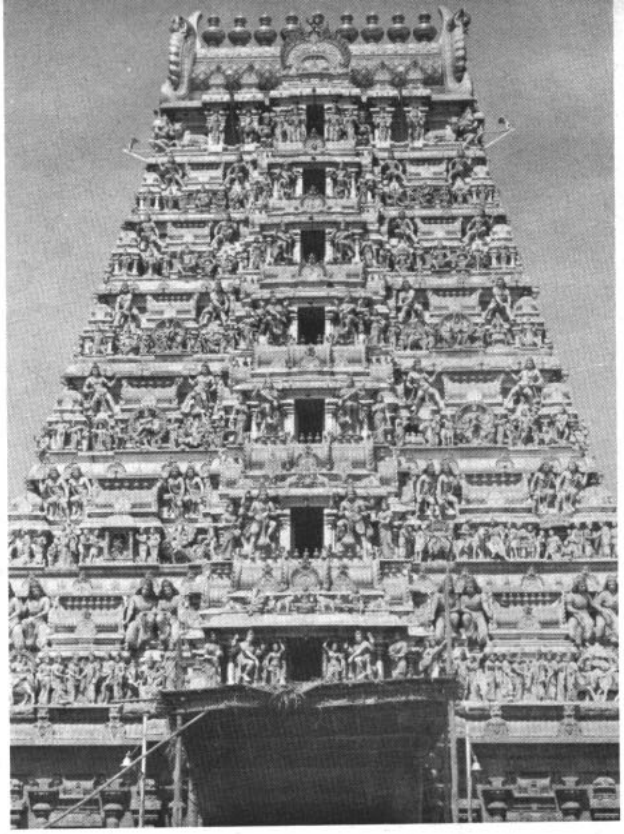
Friday PM: Business communications are studied at the World Trade Center of New England. In late afternoon a wind-up session is conducted by the District PIO to relate the activities of a Navy PIO to the trainee's observations during the course.

The Naval Reserve Public Relations Companies are going concerns, making up a capable and experienced "sales force" for the Navy.

If your travels take you to areas in which a PubRel Company is located, visit the unit and pass the word on your activities. Further, if you have material which might be of interest to these units, or projects you would like to suggest, advise CHINFO, who is Navy Department "sponsor."

You'll find the PubRel units eager to help tell your story which, after all, is the Navy's story.

SALTY SALESMEN—San Diego Reserves and prospective recruits pose on deck during open house held by unit.

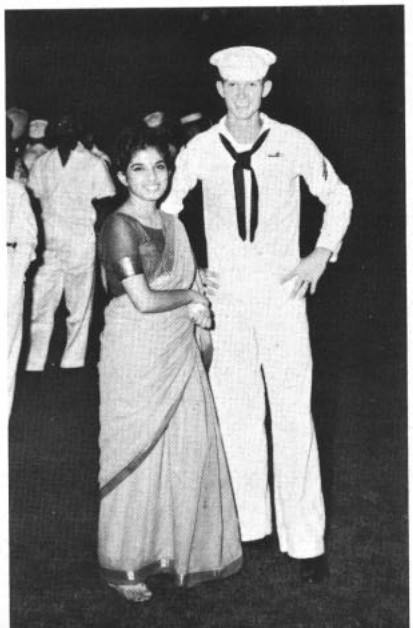


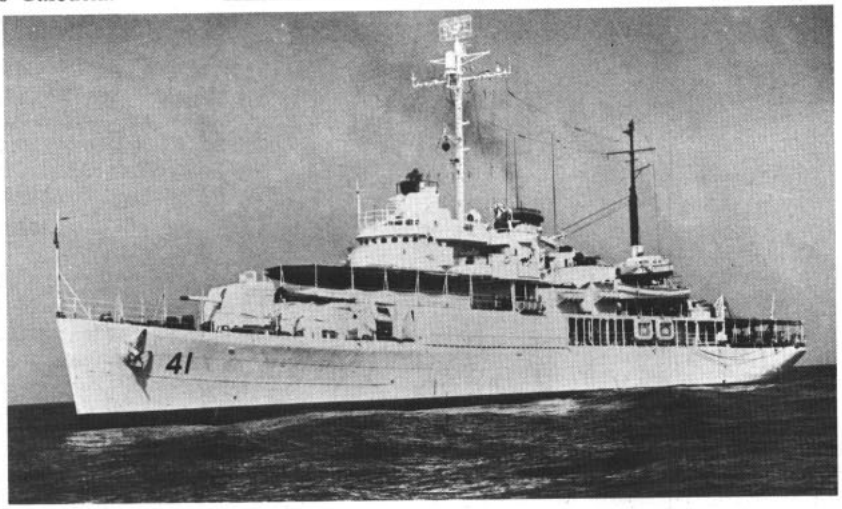
Stopover in India

THE "GALLOPING GHOST of the Persian Coast," USS *Greenwich Bay* (AVP 41), hit port Stateside with her crew full of tales of strange and beautiful sights of the Middle East. For the ship this was an old story, as she had just returned from her 12th deployment as flagship for Commander Middle East Force.

On this last tour, the "E" winning seaplane tender cruised some 19,000 miles carrying the flag to rare and exotic ports as far east as Chittagong, Pakistan. Among the many places that will be long remembered by crew members of *Greenwich Bay* were Calcutta and Madras, India, and Colombo, Ceylon. In addition to having a ball seeing the sights in these faraway places, the Navymen spread good will for the United States as they participated in softball games, made blood donations, held parties ashore and guided tours aboard their ship.

Top: C. W. Best, RMSN, USN, admires the intricate work on a temple in Calcutta, India. *Top Right:* Hindu temple in Madras was one of the many wonders of the Middle East seen by *Greenwich Bay* sailors. *Right:* G. J. Bailey, SN, USN, pauses to rest in botanical gardens while sightseeing in Kandy, Ceylon. *Lower Right:* USS *Greenwich Bay* (AVP 41) cruises Middle East in her special white paint. *Lower Left:* E. R. Russel, SN, USN, chats with Indian hostess during visit to Calcutta.





SERVICESCOPE

Brief news items about other branches of the armed services.

THE AIR FORCE has signed a six-month contract to develop the guidance system for *Dynasoar*, a manned hypersonic space glider.

Dynasoar research flights are planned for the mid-60s. The delta-winged glider will be boosted into space by a *Titan* ICBM. The program will explore the potential of hypersonic (five times the speed of sound, or faster) and orbital vehicles, with particular emphasis on a study of aerodynamic heating.

The delta-wing glider will be able to maneuver while in its glide back to earth and will let the Air Force explore problems of hypersonic flight. *Dynasoar* will make a conventional landing after it returns from orbit.

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THE WEAPONS MODERNIZATION program of the Army is not only reducing the weight of the gear used by the individual rifleman but also the weight of larger weapons. Weight reductions have been made through the use of newer, lighter metals and plastics.

The M14 rifle and the M60 machine gun, for example, replace seven earlier infantry weapons, including the M1 rifle. The M14, already in the hands of some riflemen, is simple to operate, has a 20-round clip instead of the 8-round clip of the M1, and weighs a pound less than the M1.

A new 81-mm mortar also is under development. It will weigh 17 pounds less than the older model. Again, the new 4.2-inch mortar has cut 162 pounds off the mortar crew's load. Another development is a more powerful 120-mm recoilless rifle. It will replace the 106-mm model with a savings of 155 pounds in total weight.

Improved mobility through weight reduction is in prospect for other branches of the Army. The artillery will get a new self-propelled 105-mm howitzer, an 8-inch howitzer, a 155-mm howitzer and a 175-mm rifle—with weight reductions ranging from seven tons for the 105-mm howitzer to 21 tons for the 8-inch howitzer.

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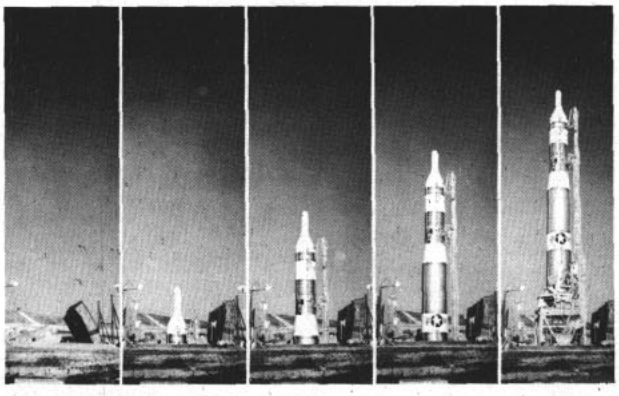
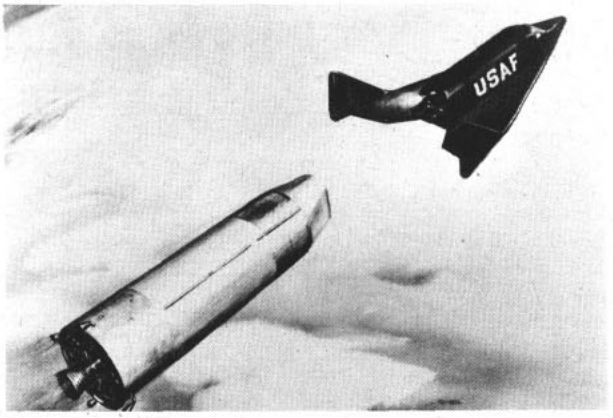
THE AIR FORCE'S first mobile *Minuteman* missile unit has been activated at Hill Air Force Base, near Ogden, Utah. Designated as the 4062nd Strategic Missile Wing, the new unit is a part of the SAC's 22nd Air Division.



RISE AND SHINE—*Titan*, ICBM of the Air Force, takes only a few minutes to rise from its underground home.



ON ITS OWN—Artist's conception shows Air Force's *Dynasoar* space glider after separation from booster.

Next year the wing will be assigned two squadrons, the 752nd and 753rd.

Air Force men assigned to the 4062nd participate in the development of the mobile *Minuteman* missile program and in a training program for those to be assigned to the two squadrons.

The 4062nd Wing personnel do some railroading, too. They man *Minuteman*-rigged trains over portions of the nation's railroad system. A series of tests carried out last year proved the feasibility of the roving rail-car missile launchers.

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ARMY TANK CREWMEN will, in the future, be aided in their night operations by searchlights, periscopes and binoculars using infrared light. Advances along these lines are being made at the U.S. Army Engineer Research and Development Laboratories, Fort Belvoir, Va.

Under development there are items of a tank kit consisting of an infrared-visible xenon searchlight, a gunner's infrared-visible periscope, a tank commander's infrared periscope, and a hand-held infrared binocular.

The searchlight is mounted so that it operates in unison with the tank's gun. Its beam can be varied in width and intensity. It emits infrared radiation which reflects off objects under observation. The reflected rays are then seen through the periscopes and binoculars.

The tank gunner's periscope has both wide-angle and high-magnification channels using ordinary light and a high-magnification channel using infrared.

The tank commander's infrared periscope allows him to make a closed hatch infrared view.

Armored night attacks have seldom been used in past wars because of the limited ability of the crew to see. But night operations would become increasingly necessary in the future event of a war, for nuclear weapons and advanced surveillance techniques make daylight operations more difficult. The new infrared devices will give the tank crewmen the opportunity to capitalize on the hours of darkness.

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PROJECT MERCURY—the National Aeronautics and Space Administration's manned space flight program—is underway full blast at Cape Canaveral. And just one

small phase of the over-all program—the recovery of errant nose capsules, dummy or real, which come down in the marshlands and scrub palmetto-covered swamps adjacent to the Cape—presents a striking example of inter-service cooperation at work.

Charged with the recovery of those stray capsules is an eight-man team from the U. S. Army Transportation Research Command, Ft. Eustis, Va. Equipped with two five-ton and one 15-ton LARC, the team is housed at, and operates from, Patrick Air Force Base at Cape Canaveral, and works in close conjunction with U. S. Marine Corps helicopters, which spot the nose capsules from the air and help guide the LARCs to the scene.

LARCs (Lighter, Amphibious, Resupply, Cargo) are, as the name implies, truck-amphibians which operate with equal facility on land or water. The smaller version, the LARC-5, is basically a water craft, designed for maximum simplicity and minimum maintenance. A gasoline engine supplies power to all four wheels on land, and turns a single propeller for travel on water.

The much larger LARC-15 is constructed of aluminum alloy, is 45 feet long, and has a large rear ramp to speed up loading and unloading. Its two gasoline engines give it a land speed of 25 miles an hour, and a water speed of some eight-and-a-half knots.

According to the assistant head of NASA's recovery operations branch, "the ability of these do-everything and go-everywhere Army LARCs to recover practice capsules under almost any conditions is really amazing."

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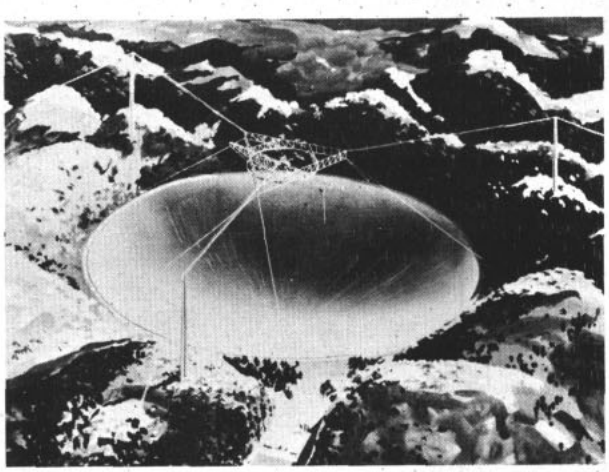
SOLDIERS WILL SOON BE ISSUED a gas mask of a new design, the first major change in mask evolution since 1947.

The mask—the M17—does not have the protruding canister common to the masks in the past. The canister has been eliminated through the use of a newly developed lightweight filter material. Cavities molded into the rubber facepiece contain pads of the material.

Developed by the Army's Chemical Corps, the M-17 is designed to give respiratory protection against war gases, germ warfare agents and airborne radioactive fallout particles. Other features of the mask are lower breathing resistance, better vision, better speech transmission and greater comfort.

NO CANISTER NEEDED—Army's new M-17 combat gas mask is scheduled to replace present canister-type mask.



SOME DISH—Artist's conception shows world's largest radar now being built by Army Engineers in Puerto Rico.

THE AIR FORCE is using electronic forecasting to speed development of its *Skybolt* program.

Called Program Evaluation Procedure—or PEP—it's essentially a digital computer-analyzed review of every detail of *Skybolt*, an air-launched ballistic missile system.

Some 20,000 events which have occurred or will occur during the development of the *Skybolt* system have been itemized and then coded into computer "language" on magnetic tape. An electronic brain compares and analyzes these events then, reporting through an electric printer, reveals those activities which must be speeded up to meet deadlines.

Armed with this fourth-dimensional eyesight, *Skybolt's* management team is able to project today's activities far into the future to spot possible bottlenecks and reassign men and materials to prevent them from developing.

At Wright-Patterson Air Force Base, Ohio, Air Force technicians analyze data both from *Skybolt's* prime contractor and from other Air Force commands participating in the program. With all this information at their fingertips, the technicians can not only monitor the prime contractor's progress, but can also plan the phasing-in of B-52 bombers and their crews, training requirements and logistics support as well.

★ ★ ★

STEAM LOCOMOTIVES, which are pretty much a thing of the past on the nation's railroads, are a standard item at one army outfit. At Fort Eustis, Va., soldier-railroaders of the 774th Transportation Group (Railway) operate three steam locomotives on regularly-scheduled runs on the Eustis railroad.

Five others are maintained in mothballs for an emergency. Also at Fort Eustis are 11 diesel-electric engines and 180 pieces of rolling stock.

The engines are used to train newly-assigned men in the steam railroading trade. The Army has a good reason for its emphasis on steam railroading. Countries abroad still use steam locomotives extensively, and probably will for years to come.

During the Korean conflict, three battalions of Eustis-trained men operated the "locos" of the Korean Railroad over tens of thousands of miles of track under severe combat theater conditions.

LETTERS TO THE EDITOR

Bonus for Extending Enlistment

SIR: On 6 Aug 1960, I signed an agreement to extend my enlistment for one year. Since then I have heard rumors that I could be paid a bonus for a one-year or two-year extension.

When I asked the personnel office about this, I received a negative answer. Rumors are sometimes true. Is this one? —W.D.T., PH3, USN.

• *Like many rumors, this one only comes close to the truth. Actually, you are not entitled to a reenlistment bonus for your one-year extension. If you enter into a second one-year extension, however, you can be paid a reenlistment bonus for the combined two years.*

Should you later extend that same enlistment for the third one-year term, you could receive a bonus for the aggregate of the extensions, less any amount already paid you for the other extensions.

Regardless of whether or not you are paid a bonus for these extensions, they must be counted as a reenlistment when figuring any future reenlistment bonus. All this bonus-for-extensions information is based on a recent Comptroller General decision.—ED.

Ophold While on Seavey

SIR: I have a few questions on the Shorvey-Seavey system for which I would like answers. They are as follows:

Can a man who has received orders be held until his relief is on board, even though he is on Seavey and the ship is planning an extended tour of duty?

If I am on Seavey, does an extension have to accompany my rotation data card to PAMI if I don't have enough time left for shore duty?

If I take a discharge at a receiving station and reenlist at the receiving station within 48 hours, will I still be on the Seavey list?

I would like to know the answers to these questions because I will be eligible for shore duty this month, but the bureau put an operation hold on all personnel until 1 Jun 1961. I didn't think the system worked that way— J.P.N., SF1, USN

• *A ship can hold a man on Seavey, if the ship is planning an extended tour of duty, under precisely the action you mentioned in your last paragraph, i.e., an "Ophold." Under current funding restrictions, a ship may request modification of orders until the ship returns to CONUS. Thus a man may be held although enlisted personnel do not ordinarily come under sight relief.*

Unless a man has the necessary obligated service, he will be placed on the inactive Seavey list and will not be ordered to shore duty. An extension would, therefore, be necessary.

If you reenlist within 48 hours, you will not remain on the Seavey list automatically. When you go to the receiving station of your own volition, the Navy assumes you intend to become a civilian. If you do decide to reenlist later— even though it is a comparatively short time after your discharge, your reenlistment is immaterial. Your name was removed from the current Seavey when you were transferred and may be resubmitted in the next annual submissions for Seavey.—ED.

Name Change

SIR: When authorization is received from BuPers to change an enlisted man's name in his service record, is the new name entered on all pages in the service record?

Or, should the new name be shown only on the enlistment contract and on pages 3, 4 and 11?— J.S., YNC, USNR.

• *All service record pages should bear the new name. Since a service record is the official record of one person, such a record could not be correct if it contained two names.*

The same practice is followed not only for men, but also in the case of Waves who change names through marriage.—ED.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Battleship South Dakota

SIR: I was looking at an August 1958 issue of ALL HANDS recently, and on page 63, you say that construction was started on *South Dakota* at the New York Naval Shipyard, but the ship was later scrapped as a result of a 1922 treaty.

This came as rather a surprise to me, because I served aboard *South Dakota* (BB 57) during World War II. What's the story?—C.D.C., SM1, USNR.

• *The battleship* South Dakota *to which we referred in the August 1958 issue should have been designated BB 49, not BB 57. Construction of BB 49 was, as we said, cancelled in February 1922 in accordance with the provisions of the Washington Treaty for the Limitation of Naval Armament. BB 49 was one of several battleships begun or completed at the New York Naval Shipyard. (As you will recall, that was the point of the story.)*

BB 57, on which you served during World War II, was built at Camden, N. J. Her keel was laid in 1939, and she was commissioned on 20 Mar 1942. She is now in the Atlantic Reserve Fleet. All clear, now?—ED.

Geneva Conventions I.D. Card

SIR: My letter deals with the Geneva Conventions Identification Card. Many persons are of the opinion that the card should be issued each man only upon deployment of the ship — and placed in his service record when the ship returns to the continental U.S.

Others, however, maintain that the card should be issued to a man upon receipt of orders directing transfer to a ship or overseas activity. He then retains the card until return to continental shore duty.—J.T.B., YNC, USN.

• *The Geneva Conventions Identification Cards should be issued to a person upon receipt of orders directing transfer to a ship or overseas activity. It should be retained by him until he* reports to shore duty in the U.S. *At that time it will be placed in his service record.*

It is realized that practice in the Fleet varies from the foregoing. A forthcoming change to the "BuPers Manual" will clarify the instructions for preparation and issue of the card.—ED.

Transferred for Separation

SIR: I have a question concerning enlisted men who are detached from their permanent duty station and ordered to a separation activity for processing. In such cases, are those being transferred entitled to proceed time?—L.N.M., YNC, USN.

• *Only upon transfer from one permanent duty station to another permanent duty station may proceed time be granted to enlisted personnel. Since those being transferred for separation are to have no new permanent duty station they are not entitled to proceed time.*—ED.

Dislocation Allowance

SIR: A while back I received orders to report to Pearl Harbor for a normal tour of overseas shore duty. At that time I was serving in a destroyer homeported at Long Beach, Calif., which was later deployed to WESTPAC.

When I received the orders, my dependents were visiting relatives on the island of Molokai, Hawaii—though their residence continued to be Long Beach, for they planned to return there.

Upon receipt of orders aboard the destroyer I was informed that I would go directly to Pearl Harbor from WESTPAC. So I told my dependents to remain in Hawaii, as there was no point in returning to Long Beach.

After my dependents arrived at Pearl Harbor I applied for dislocation allowance. I was informed that I was not eligible because my dependents had not been at Long Beach.

Could you give me any advice on this?—W.E., SK1, USN.

• *Your case appears to be rather unusual. From what you say, there is a possibility that entitlement to a dislocation allowance may exist in your case.*

Not all cases are clear-cut, and sometimes disbursing officers have to go to a higher authority for a decision.

As Par. 4002.2 of "Navy Travel Instructions" points out: "When the circumstances of travel in a particular case create reasonable doubt concerning any amount which may be payable, the claim of a Navy member, complete with supporting papers, will be forwarded for settlement to the Navy Regional Accounts Office, Washington 25, D.C."

In view of this, you might try putting in another claim.—ED.

Waiting for those Orders

SIR: I have been waiting for shore duty orders for more than two years now. My sea duty commencement date was January 1949. I have designated "anywhere," First Naval District (No. 1 preference—Newport, R.I.) as a choice.

Is there any possibility of ascertaining even the calendar *year* in which I might expect assignment ashore. The way it looks now, I may retire at sea waiting for orders that never come. I may be wrong, but it seems as if 13 years at sea should put me fairly close to the top of the waiting list.

While I realize that it is extremely difficult to place everyone exactly where he desires to be, I would like to find out if possible, for planning purposes, if I have any chance of getting Newport, or some place in the First Naval District, any time in the near future. —W.A.K., GMCA, USN.

• *Under Seavey, as it is intended to work, and indeed as it does work the vast majority of the time, all Navymen on a particular segment should be, and are, assigned to shore duty before anyone from the following segment. In other words, everyone on segment 1-59 should be ordered ashore before anyone on segment 1-60.*

Unfortunately, this is not always possible. Some Navymen with particular qualifications are needed ashore at an accelerated pace, thus depleting the Seavey of people in those categories. When this happens, people with those particular qualifications from a following segment may be ordered ashore before other people remaining on a previous segment.

You are on segment 1-58, and are currently on the 1-6 (Recruiting) list. In essence you are number one on the list in view of your belonging to segment 1-58. Incidentally, you must have changed your choice fairly recently, since you don't appear on any previous monthly 1-6 listings.

Your first choice — anywhere First Naval District—will be relatively easy to give you. However, recent DOD limitations on the budget, which you probably have heard about, have thrown another monkey wrench into the works. They have affected the amount of travel money available to such an extent that the normal flow of Navymen

FIRE ONE—USS *Canberra* (CAG 2) lets loose with a *Terrier* guided missile from her stern launcher while on a training exercise in Atlantic waters.

HIGH FLYERS—LT H. L. Monroe (left) and CDR L. A. Heath, USN, stand by the A3J *Vigilante* in which they flew to the record altitude of 91,450 feet.

SOUTHERN SCENERY is snowy and spectacular. View *(left)* is Antarctic's Bellingshausen Sea, *(rt)* is Cape Hallett.

on Seavey has temporarily, at least, become severely limited. Whenever these restrictions are removed, you should be among the very first receiving orders to the area of your choice. It is highly probable that this will not be until after the beginning of the next fiscal year, that is 1 Jul 1961.

Here's another point to remember. You—and others—may be under the impression that length of sea duty determines your relative standing on the Seavey list. This is not so. Segment cut-off dates merely establish who is to be on the list. Relative standings are determined by the individual's active duty base date.—ED.

State of Legal Residence

SIR: What are the procedures, if any, which may be followed to establish residence in a state in which I don't live. My daughter would like to take advantage of the lower tuition rates for state residents at the state university she plans to attend.—R.R., CDR, USN.

• *Your letter didn't make clear whether you ever lived in the state in question, or whether you ever intended to, or if you're interested in establishing a legal residence there for the sole purpose of taking advantage of lower college tuition rates. Most cases of this nature are decided on their individual merits, oftentimes in the courts—and that costs money.*

However, in order to provide you with a more or less general reply, we took your question up with a legal officer in BuPers. Here's what he had to say on the subject:

Establishing a "legal residence" or domicile in a particular state requires two elements — (1) physical presence in the state, and (2) an intent to make that state one's home for the indefinite future.

Everyone starts out with the domicile of his parents. A domicile, once established, continues until a new one is acquired. It is not essential to having a particular state as a domicile that one have a mailing address within that state. Voting within a state is one item of evidence indicating that the individual regards that state as his home. Voting is not conclusive of domicile, but the fact that one has voted in another state, after ceasing to reside in a previous one, may tend to defeat a claim that domicile has continued in the first one. The statement of "home of record" for federal administrative purposes is virtually meaningless as evidence of domicile, as this serves the purpose of establishing a place to which a serviceman may be transported at government expense on leaving the service. It may in some instances be a place where he lived only temporarily, and occasionally a place where he has never been. It may or may not be a factor in establishing a legal residence.

Dealing as specifically as possible with your particular question, the best case which you could make for having a domicile in the state you want to declare as your residence would be to show that you were born there, have always maintained a mailing address there, and have consistently voted in the precinct in which that mailing address is located. Next best would be to show that, although you were born and reared elsewhere, you have bought a home in this state which you still maintain, you and your family lived there for a period, joined a local church and other community organizations, voted there then and since have not voted elsewhere, and you expect to return there when you are separated from the service.

One or more of these elements may be lacking, but if too many of them are, the state may refuse to determine administratively that you are domiciled there. In that case you would be forced to go into the courts to establish your entitlement to whatever benefits you were seeking. In some instances the value of the benefit sought would not warrant the cost of litigation that might be required to obtain it.—ED.

Questions on Dogging the Liberty Sections

SIR: When a ship is on three-section liberty, which day of the week should it be dogged and what is the best way of dogging the sections?—D.N., SF1, USN.

• *How the sections are rotated and on what day the rotation is altered to give each section an equal number of long weekends is up to the CO or exec.*

Here is the way many ships rotate liberty sections on a three-section basis. In this case the dogging takes place on Monday. It would work just as well any other weekday, however.—ED.

LIBERTY SECTION

S	M	T	W	T	F	S
1	2	3	4	5	6	7
3	2	3	1	2	3	1
8	9	10	11	12	13	14
1	3	1	2	3	1	2
15	16	17	18	19	20	21
2	1	2	3	1	2	3
22	23	24	25	26	27	28
3	2	3	1	2	3	1
29	30	31				
1	3	1				

Arrivals and Departures

SIR: In your reply to LT R.J.L., USN, in the October ALL HANDS (Beeps, Gongs, and Bells) you gave several details about sounding the gong on the arrival and departure of officers. It seems to me that you left part of his third question pretty much unanswered, the part reading: "What is the proper phraseology of the word to be passed with the beeps . . ."

Article 411 of DNC-27 *(U.S. Naval Flags and Pennants, Descriptions, Uses and Customs)* indicates that the following terminology should be used for announcing arrivals and departures of senior officers:

Officer or Official	
The President or Vice President of the U.S.	"United States"
Secretary of Defense, Deputy or Assistant Secretary of Defense	"Defense"
The Secretary, Under Secretary, or Assistant Secretary of the Navy	"Navy"
Chief of Naval Operations, Vice Chief of Naval Operations	"Naval Operations"
Fleet or Force Commander	".....Fleet" (or abbreviation of administrative title)
General Officer	"General Officer"
A Chief of Staff	"Staff"
A Flotilla Commander	".....(Type) Flot .....(number)"
A Squadron Commander	".....(Type) Ron .....(number)"
A Division Commander	".....(Type) Div .....(number)"
A Marine officer commanding a brigade	"Brigade Commander"
A commanding officer of a ship	"....." (Name of ship)
A Marine officer commanding a regiment	"Regimental Commander"

Thus, COMSUBPAC coming aboard would be announced as "SUBPAC Arriving." COMDESRON 14 leaving the ship would be announced as "DESRON One Four Departing." CO USS *Stormalong* coming aboard would be announced as "*Stormalong.*"

There has been a lot of confusion along these lines in the matter of correct phraseology and I feel sure that ALL HANDS could clear some of it up by publishing the above table.

One last point. You stated that ". . . the word 'staff' may be used for senior officers." According to DNC-27, "staff" would be used only for a chief of staff. —D. C. Graham, SMC, USN.

• *Thanks for straightening out that point. We were interested to note, however, while checking up on your comments through DNC 27, that there appears to be some confusion over the original question, which, as you may recall, concerned the use of the chemical (or gas) alarm as a means of passing the word.*

Although, as we stated in the October ALL HANDS, *NWP-50 and NWIP-51 would suggest that the chemical alarm should not be used for passing the word, Article 412 of DNC-27 states:*

"For the benefit of officers on board who need to know, the OOD should indicate the arrival and departure of Commanders, Chiefs of Staff, and Commanding Officers as follows: (a) Over the loudspeaker system, sound the boat gong, special gong, or gas alarm (as specified locally) in groups of two, corresponding to the number of side boys to which the officer is entitled . . ."

It would appear that the saving phrase here is "as specified locally." In other words, what CO says, is it.—ED.

HOMEWARD BOUND—*USS Little Rock* (CLG 4), a *Talos* missile ship, returns to Philadelphia after a successful two-month training cruise in the Caribbean.

MEMPHIS SALVAGE MEN—Battleship *USS New Hampshire* was sent to salvage *USS Memphis* in December of 1916. *Left:* Electrical gang of *USS New Hampshire* help with salvage. *Right:* Battleshipmen explore the nearby jungles.

Remember Gunboat Castine?

SIR: Various Letters to the Editor (October 1959, April 1960 and September 1960) have discussed the loss of USS *Memphis*. I am surprised, however, that no mention has yet been made of another U.S. Navy ship that was also riding at anchor in the harbor of Santo Domingo (now Ciudad Trujillo) that fateful day, 29 Aug 1916.

The ship was the little gunboat USS *Castine*.

At the time the tidal wave disturbance was first noticed, *Castine* was lying at anchor inshore of *Memphis*. While *Memphis* was dragging her anchors and trying desperately to build up a head of steam, little *Castine*—grossing 1177 tons—was battling her way to the open sea and safety. At times the seas completely enveloped the ship, and she was entirely lost from view as she struggled for her very life.

Three crewmen were lost in the struggle. All her boats were carried away. Her radio antenna went by the board. The force of the waves denuded her upper decks, sweeping all deck gear to sea. *Castine* shipped tons of water, and her lower decks became flooded. But she did survive.

Back to *Memphis* for a post-mortem item: In December 1916 the battleship *New Hampshire* was ordered to Santo Domingo for salvage and other such duty as might be required. We enjoyed our duty in the Dominican Republic. I remember we used to play inter-division baseball on the mesa adjacent to the rusting hulk of *Memphis*. We had swimming parties on the sandy stretch of beach, liberty in the city and an occasional trek into the interior.

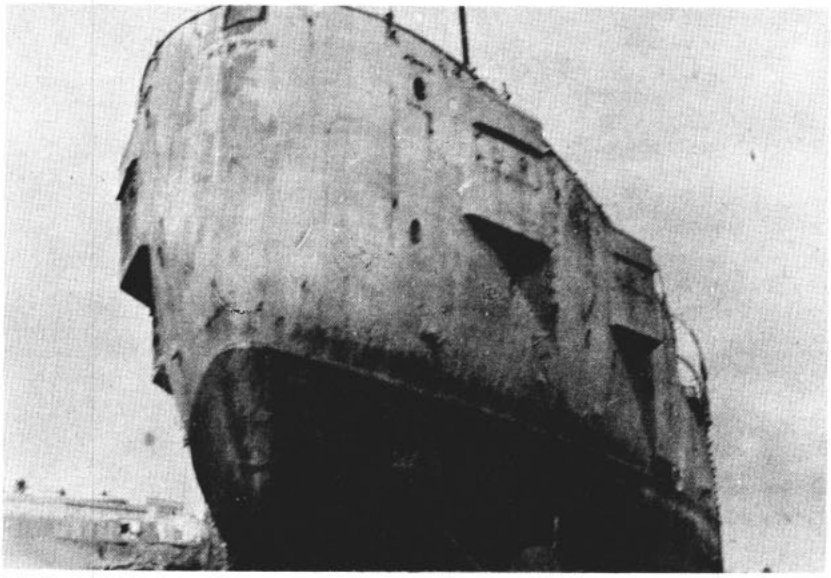
In general, we had a fine time. But the visit was soon to end. In February 1917, after diplomatic relations with Germany had been broken off, *New Hampshire* was ordered into a wartime status, and under cover of darkness she slipped out of the harbor—eventually to join the Grand Fleet.

Gunboat *Castine*, too, was to head for European waters. — R.R. Myers, EMC, USN (Ret.).

• *From all the evidence,* Castine, *though small, was quite a ship.*

Named for a city in Maine, she was 204 feet in length and carried eight 4-inch guns, four 6-pounders and one Gatling gun. She was commissioned 22 Oct 1894 at the New York Navy Yard and decommissioned at New Orleans, La., 28 Aug 1919.

Castine *completed her Caribbean duty early in 1917 and then headed across the Atlantic. The greater part of her World War I service consisted of duty with the Allies' Gibraltar Patrol Force.*—ED.



LAND SAKES—*USS Memphis* looked like this after being driven on the beach by a tidal wave in the harbor now called Ciudad Trujillo, in August 1916.

Credit for Earned Leave

SIR: Considerable disagreement has arisen among the officers here concerning the "accrued leave due" block on the Officer Leave Request and Authorization (NavPers 2644).

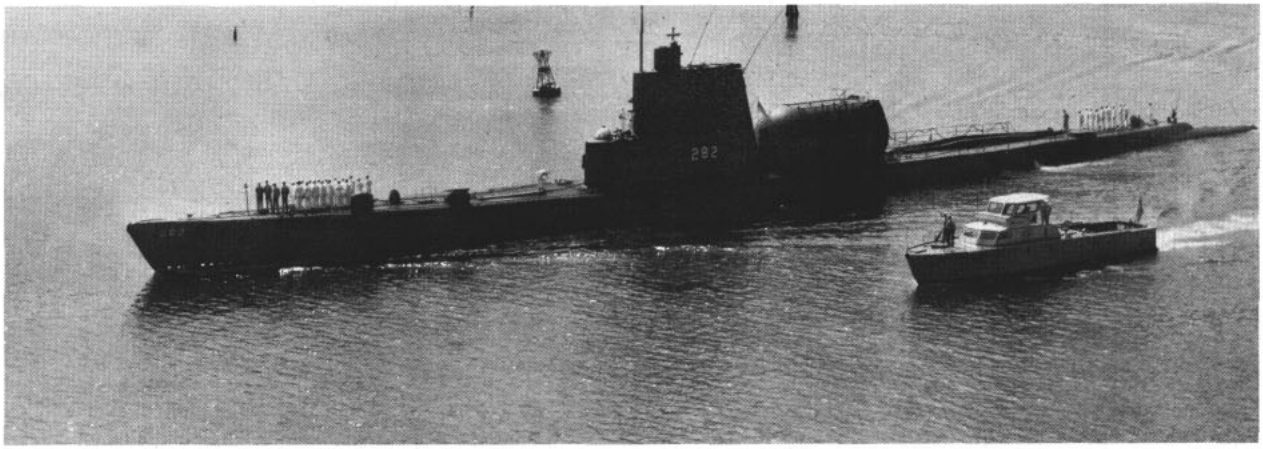
What should go in this block, leave credit as of 1 July of the current fiscal year, or earned leave credit as of any given date during the year?

The *BuPers Manual* doesn't furnish a definition of accrued leave nor can I find any specific instructions for the preparation of the NavPers 2644.—W.H.O., YNCS, USN.

• *Earned leave credit as of any given date during the year should go in that block.*

Apparently you still have the old forms (New 4-58). The more recent ones, which were revised in March 1959, may be easier to understand. The accrued leave block has been changed to "earned leave due." The old forms may still be used, but the new ones are now being issued.

With the revised wording in the block in question, the information to be entered on the form is more clearly defined in the "BuPers Manual." Article C-6103.3 explains earned leave as "the term used to describe the amount of leave standing to an individual's credit as of any given date."—ED.



GUIDED MISSILE sub *USS Tunny* (SSG 282), packing *Regulus* guided missiles, returns to Pearl Harbor after patrol.

Gold Lace for POs

SIR: The November 1960 issue of ALL HANDS carried a letter to the editor on continuous active duty which quoted *Uniform Regulations* on gold lace service stripes for qualified CPOs.

Where can I find authorization for the wearing of these stripes by first and second class petty officers?—M.B.K., YN2, USN.

• *Article 0767 of "Uniform Regulations" states that service stripes and eligibility requirements for these stripes are same as prescribed for CPO's.*—ED.

Sword, Swashway and Rushmore

SIR: I have served on board *USS Rushmore* (LSD-14) and was interested to note that the 1958 edition of Jane's *Fighting Ships* also refers to her as ex-*Sword* and ex-*Swashway*.

I know she was intended for British use as *Sword* but I am in the dark concerning the name *Swashway*. Can you shed any light?—R.S., RD2, USN.

• *We found other references to ex-*Sword, *ex-*Swashway *but not a real explanation of the double-ex. You are correct in your information regarding the ship's intended use by the British. The consensus is that the British originally selected the name* Sword *and later changed it to* Swashway. *However, the ship ultimately was commissioned by the U.S. Navy as* USS Rushmore *to honor the South Dakota site of the sculptured heads of Washington, Jefferson, Lincoln and Theodore Roosevelt on Mt. Rushmore.*

Rushmore *led an active life. She first saw action at Leyte in October 1944. The only untoward event during the landings involved the ship's mascot—a brown and black puppy named Rush. Rush broke his left hind leg in a jump from the lap of a crew member to the deck. The ship's doctor repaired the leg and Rush was taken ashore for the first time at New Guinea on Thanksgiving Day and introduced to his first tree—a stately coconut palm.*

In 1945, Rushmore *was making runs between islands of the South Pacific and took part in assault operations at Palawan and Zamboanga. On 1 May her charmed life again came into play. While in the Dutch East Indies (now Indonesia) at the invasion of Tarakan Island, a torpedo was sighted heading her way. The lookouts barely had time to pass the word when the torpedo struck—and glanced harmlessly off the hull without exploding.*

Later the same month, she proceeded to Samar where she took a 137-foot captured Japanese cargo transport submarine into her well for transportation to San Francisco.

Her crew arrived in Japan in September 1945 when she transported the 1059th Port Construction and Repair Group to southern Honshu.

She was inactivated at Yorktown, Va., in May 1946 after having traveled approximately 88,000 nautical miles, and was mothballed at Pascagoula, Miss.

The Korean conflict brought Rushmore *back into active service, during which she has logged well over 160,000 miles ranging the Atlantic and Mediterranean and taking part in Caribbean exercises, Reserve cruises and regular Arctic trips to resupply DEW-line bases. The latter duty became an annual* Rushmore *assignment, for which her hull was ice-strengthened. Only the icebreakers could match* Rushmore's *six consecutive summers of Arctic experience from 1953 to 1958.*

One of Rushmore's *more interesting assignments came in May 1954 when she was U.S. Navy representative in ceremonies at Istanbul, Turkey, on the occasion of the return of various small Lend-Lease vessels from the USSR.* Rushmore *returned these vessels to the U.S. in her well.*

What happened to mascot Rush? He saw his ship safely through World War II but was lost or stolen in Portland, Oregon, in 1946. However, on Christmas Eve, 1958, Rushmore's *sponsor presented the crew with Rush II, a worthy successor to the original.*—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS MAGAZINE, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS *Enterprise* (CVS 6)—a reunion is scheduled for 27, 28 and 29 July, in Washington, D.C. For further information, write to Joseph Deigh, 3750 Jason Ave., Alexandria, Va.

• USS *South Dakota* Veterans' Association of World War I—The 40th annual reunion of the World War I crew will be held at Portland, Ore., on 8 April. For more details, write to Carl H. Haggland, 2519 N.E. 59th Ave., Portland 13, Ore.

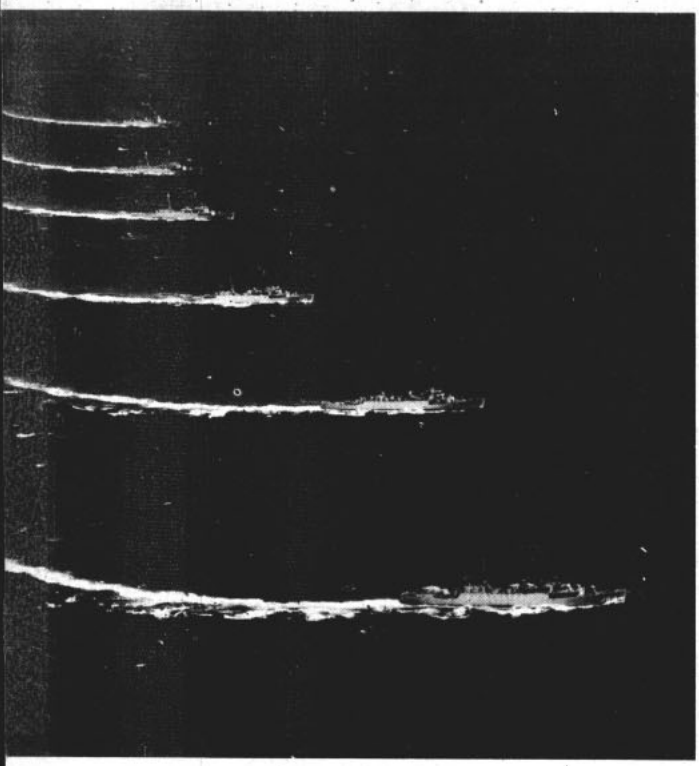
• USS *Langley* — All officers who served on board USS *Langley* and who are interested in holding a reunion in Pensacola, Fla., in June 1961, during the celebration of the 50th anniversary of Naval Aviation, may write to R. L. Merkel, M.D., 302 National Reserve Building, Topeka, Kan.

Loans for College Education

SIR: I joined the Navy in January 1957, and I plan to attend college after I am discharged. Since I am not eligible for GI Bill benefits, is it possible to obtain a government loan of any kind for educational purposes?— F. M. S., PN2, USN.

• *The National Defense Student Loan Program, which is administered by the Department of Health, Education and Welfare, makes such loans. They are available to needy undergraduate and graduate students on reasonable terms to complete their higher education.*

Further information about this program may be obtained from the Commissioner, Officer of Education, U.S. Department of Health, Education, and Welfare, Washington 25, D.C.—ED.



Offensive Potentiality

The following report was passed on to us by the Office of the Chief of Naval Operations. It brings up a subject which you may have discussed yourself in fantail sessions, and it's a matter about which people outside of the Navy may question you—as an expert on the sea service. What are "defensive" and "offensive" naval actions? What is the Navy's role? This will help you get the answer.

FROM TIME TO TIME we in the Navy hear our ships and aircraft, and their weapons systems referred to as "defensive" forces. We hear this from members of the other services and civilians alike.

Although such a connotation may have stemmed from the age-old reference to the Navy as the nation's first line-of-defense, it clearly evidences a misunderstanding that exists outside the Navy regarding the offensive nature of most naval combat operations and the role of our ships, aircraft and weapons systems. Everyone in the Navy shares the important responsibility of being able to speak intelligently and sincerely about what others may call our "defensive" forces, but which are in fact, "offensive" forces.

In war, the Navy does not wait for an enemy to come to our shores. We seek him out in his homeland or wherever he may choose to hide: *on, in, or near the seas.* In peace, the Navy deploys its ready forces toward the frontiers of our potential enemies or in other distant areas chosen to thwart those nations who, by their own intentions or at the suggestions of others, would disturb the peace of the world.

True, the Navy by its actions defends the United States, as do our sister services, but in war, it is the offensive operations by our Fleets that project the power and determination of the American people into the homeland of our enemies.

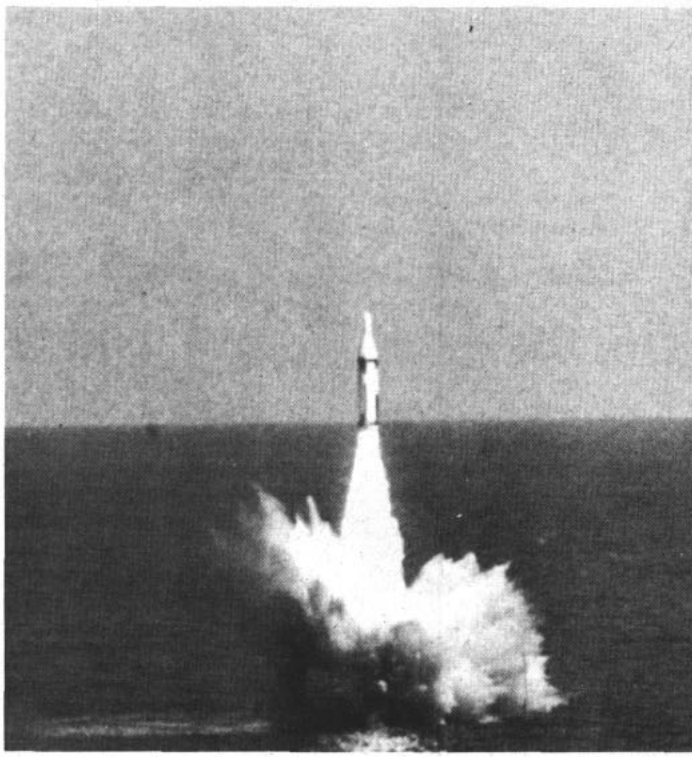
With regard to the weapons systems with which our ships and aircraft are armed, there are very few which can be categorized as only offensive or defensive. Whether they are offensive or defensive depends upon what we do with the weapons systems and what the enemy does in countering the weapons systems.

For example, if any weapons system in the Navy could be classified as defensive, most people would classify mines as a defensive weapons system. Those same mines laid in an enemy harbor to destroy enemy ships as they depart from their own harbor are just about as offensive as it is possible to get.

Our naval aircraft are fitted with air-to-air missiles. If one of these aircraft is flown over enemy territory seeking engagement with the enemy to shoot down enemy planes, it is certainly being used offensively and could well be called an offensive missile system.

If this same aircraft were used in the United States to shoot down enemy aircraft attacking the United States, it could be labeled a defensive weapons system. If the aircraft were used at sea with a task force, and was attacking an enemy territory to destroy enemy war capabilities, it would be an offensive weapons system. If the same aircraft were used at sea in the same spot, to defend itself from an attack by an enemy aircraft, it could be considered as a defensive weapons system.

However, since the whole task force was put in position in order to attack the enemy, the operation as a whole would be offensive. The ques-



—Defensive Capability

tion of whether the aircraft is purely a defensive or purely an offensive weapons system cannot be categorically determined.

Whether a weapons system is used in offense or defense is dependent on the action by the force in which it is deployed.

A Fleet striking an enemy is on the offensive. It puts itself up against the enemy. It seeks the engagement. It puts itself in a position in which it can destroy enemy capabilities to continue to fight. The enemy must defend himself against this Fleet. The whole Fleet is on the offensive. It compels the enemy to defend himself and as a result all the weapons systems in the Fleet take part in the offensive action.

This is what happened when we struck Japan with our Fleets during the last war. The enemy is on the defensive and he will use all of the weapons systems which he possibly can to destroy all the units engaged in our offensive. The enemy must seek out and try to destroy our ships, and he will do this with submarines and missiles and aircraft and everything else that he has. We will shoot down his aircraft, for example, as they try to defend his area. We will shoot down these enemy aircraft with fighters, with surface-to-air missiles, with air-to-air missiles and with anything else we have, including guns. The enemy is on the defensive. We are on the offensive. All the enemy's weapons systems used against that Fleet would be defensive weapons systems and all the weapons systems our Fleets used against the enemy would be offensive weapons systems. *The point is that a weapons system cannot usually be classified as an offensive or a defensive weapons system.* Operations, on the other hand, can frequently be classified as offensive or defensive.

Naturally, there are a few exceptions to both of these statements. It probably would be better to classify systems as passive or active. Systems that are passive are generally used in defensive roles whereas most active systems can be used either on the offensive or on the defensive.

The difficulty in distinguishing between offensive and defensive weapons systems is not restricted just to the Navy. A rifle in the hands of a Marine is offensive or defensive depending upon the use, not to which the rifle is put, but the use to which the Marine is put.

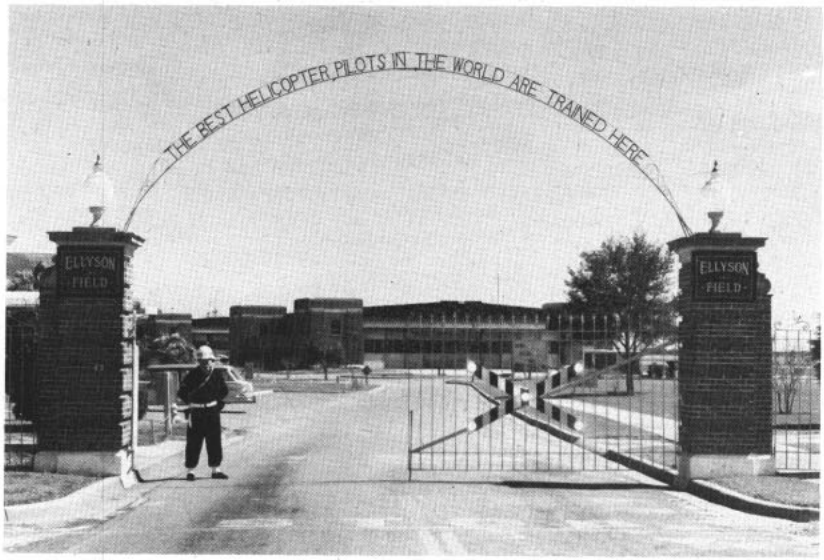
It is important not to lose sight of the flexibility that is inherent in our naval forces. This flexibility permits a discriminating and sensible choice in how we do those jobs for which the Navy is responsible.

Without performing acts of aggression in peace, or infringing on the sovereign rights of other peace-loving nations, the Navy stands ready, far from the shores of the United States, to strike at the sources of overseas threats to our national security, if need be, but fundamentally to preserve the peace.

The offensive capabilities that are inherent to our combatant ships and aircraft, and to their weapons systems, establish the Navy's key contribution to the important responsibility we are privileged to share with our sister services—the defense of the United States against all foreign aggression.

The Navy's offensive approach to this defensive responsibility remains as it was so ably expressed by John Paul Jones in 1778—"I wish to have no connection with any ship that does not sail fast, for I intend to go in harm's way."

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★



BEST ENTRANCE TOO—Many Navy and Marine Corps helicopter pilots should recognize this view of the main gate leading to Ellyson Field, Pensacola, Fla.

Copter College

Alma mater for Navy, Marine Corps and Coast Guard helicopter pilots is Helicopter Training Squadron Eight (HT-8), based at Ellyson Field, Pensacola, Fla.

More than 5100 students have received their helicopter-pilot designations at the field. Among these are 15 Navy captains and 30 Marine colonels. Eight of the former have gone on to duties as commanding officers of amphibious assault ships (LPHs) while a number of the latter became commanders of Marine Air Groups.

The squadron celebrated its 10th anniversary just a couple of months ago. Copters used in training are the HTL, HO4S and HUP. Some of the squadron's students are brand new; others are veteran Fleet pilots.

Copters from the field gained fame in mid-1954 when they assisted civilian authorities in fighting forest fires and in apprehending fire bugs in the local pine forests. The following year the squadron was rushed to flood-stricken Honduras and to Tampico, Mexico. Lives were saved by the training copters and a baby was born in one of them. The copters carried supplies to areas too remote to be supplied by other means.

HT-8 has an excellent safety record. During fiscal year 1960 there were but two accidents in more than 40,000 flying hours. Over 138,000 hours have been flown since the last helicopter fatality.

Ellyson, the squadron's field, carries the name of CDR T. G. Ellyson, USN, the first man to be designated a Naval Aviator.

YESTERDAY'S NAVY

On 9 Feb 1943, after six months of fighting, organized Japanese resistance on Guadalcanal officially came to an end. Between 13 and 15 Feb 1864 the sternwheel steamer, *USS Forest Rose* repulsed three attacks by Confederate troops on the Union-held town of Waterproof, La. On 16 Feb 1804 LT Stephen Decatur led a successful raid into Tripoli harbor to destroy *USS Philadelphia* before the Barbary pirates could put that valuable prize to use. On 17 Feb 1755 Commodore Thomas Truxton, skipper of *USS Constellation* during the war with France, was born in Jamaica, Long Island.

Glass Case for *Polaris*

The Navy's new *Polaris* (A-2), a 1500-nautical mile missile which was launched recently from Cape Canaveral, used a new high-performance, glass-case, solid-propellant rocket motor that has taken 10 years to develop.

The radically new second-stage motor gives the *Polaris* (A-2) missile increased range and payload capabilities over the now operational A-1 missile.

Until now, all rocket chambers for military applications have been made of steel or aluminum. The new material, however, consists of continuous glass filaments surrounded by a flexible resin. The new process is important because it is simple, flexible, less expensive, and more easily produced than are earlier types.

Navy engineers use these lighter and stronger materials to lower the weight of the inert parts of the missile. Attempts to use metals at very high strength levels for rocket chambers have been unsuccessful. The successful use, for non-military application, of fiberglass-reinforced plastic in the *Vanguard* third-stage rocket motor, provided background data which led to the use of glass in the *Polaris* missile.

Deep Sea Ship

U. S. Navy LT Don Walsh and civilian scientist Jacques Piccard have ridden the bathyscaph *Trieste* down to the lowest known point in any ocean—some 35,800 feet deep in the Marianas trench—and the lessons they learned in this and numerous other underseas excursions over the past two years add up to a number of changes now being incorporated into the craft.

Re-engineering and re-outfitting, aimed at readying *Trieste* for a new series of explorations, is being carried out at the Naval Electronics Laboratory, San Diego.

Chief alteration involves the installation of a new gasoline leading manifold, which will simplify and speed up the taking on of the more than 33,000 gallons of gasoline required for buoyancy. It replaces the former cumbersome process whereby gaso-

line was loaded through seven different inlets, each leading to a separate tank.

Other modifications to *Trieste's* cigar-shaped float section include the addition of a catwalk or grating, and a new paint job with a type of white paint expected to prevent excessive fouling.

Springfield Takes Over

The *Terrier* surface-to-air missile-equipped cruiser USS *Springfield* (CLG 7) became the first guided missile flagship of the U. S. Sixth Fleet recently, when she relieved the heavy cruiser *Des Moines* (CA 134) in the harbor of Palermo, Sicily.

In taking over the chores of the veteran *Des Moines,* which had been Sixth Fleet flagship a record 33 consecutive months, *Springfield* became the nerve center of a Fleet of some 50 ships—including three attack aircraft carriers — and approximately 30,000 men.

Originally commissioned in 1944, *Springfield* (named both for the "Home of Lincoln" in Illinois and the "City of Homes" in Massachusetts) was taken out of mothballs last year, and a reconversion program has made her virtually a new ship. Rebuilt specifically to serve as a flagship, her current assignment is her first since her recommissioning.

Six hundred and ten feet long, and carrying a crew of about 1000, she is powered for speeds in excess of 30 knots. Her one launcher holds two of the supersonic, all-weather, solid rocket propelled *Terrier* guided missiles at one time.

Commanded by CAPT Francis D. Boyle, USN, she is homeported at Villefranche, France.

For *Des Moines,* scheduled to remain with the Sixth Fleet for a spell, her return to the U. S. late in February will mark the end of almost 160,000 miles of travel around the Mediterranean since her current tour as flagship began in March 1958. First assigned as Sixth Fleet flagship in 1950, she also filled that post during parts of 1951, '52, '53, '54, '55 and '56, and has carried the flags of nine different Sixth Fleet commanders.

She has visited virtually every country bordering the Med, participated in numerous exercises with NATO and other friendly nations, embarked President Eisenhower on a portion of his tour of world capitals, and took part in the Lebanon and Jordan operations.

WATER TAXIMEN of Villefranche are welcomed aboard *USS Des Moines* (CA 134). Rt: Commander Sixth Fleet greets members of Water Taxi Assn.

Water Taxi Skippers Welcomed by Sixth Fleet

About 70 years ago, when U.S. Navy flagships were first becoming a familiar sight in the harbor of Villefranche on the French Riviera, a small group of local fishermen organized a water taxi service to supplement the ships' liberty launches.

Now one-cylinder, six-passenger fishing craft, the water taxis have proved to be a great convenience to the crew of USS *Des Moines* (CA 134), Sixth Fleet flagship, during the 33 months the big cruiser has been homeported at Villefranche.

CAPT D. C. Lyndon, CO of *Des Moines,* in showing the appreciation of his ship's company, invited 30 water taxi skippers to tour his ship. It marked the first time the skippers had visited the ship as a group.

VADM G. W. Anderson, Jr., Commander Sixth Fleet, and Captain Lyndon, in welcoming the French visitors aboard, expressed the gratitude of all the Sixth Fleet Navymen who had, through the years, used the water taxi service.

Rich in tradition, the water taxi fleet has established its own by-laws. A fee of 100 francs (22¢) per man is charged for transportation to and from the Fleet landing. Each night the fees are gathered up and divided equally among the water taximen. A portion of the water taxi fleet's over-all income is also set aside for retired members.

'M' Frame Is Boomed

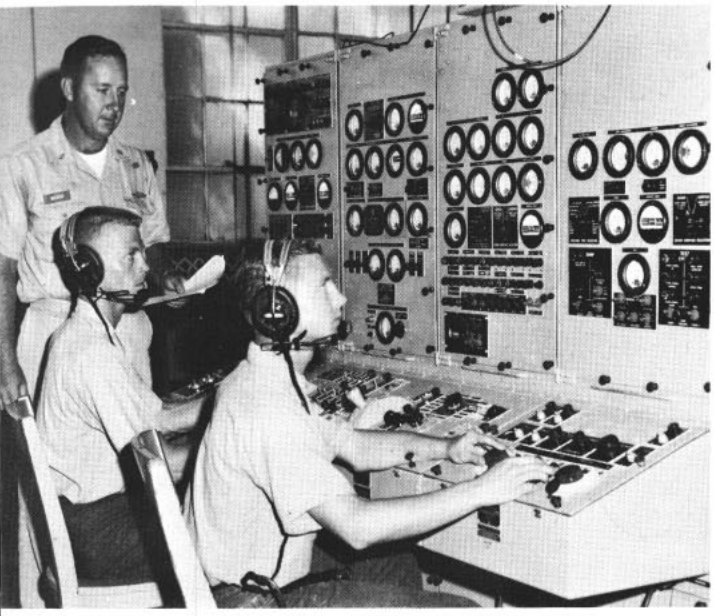
The array of booms and masts that have long identified the cargo ship may have reached the end of their usefulness.

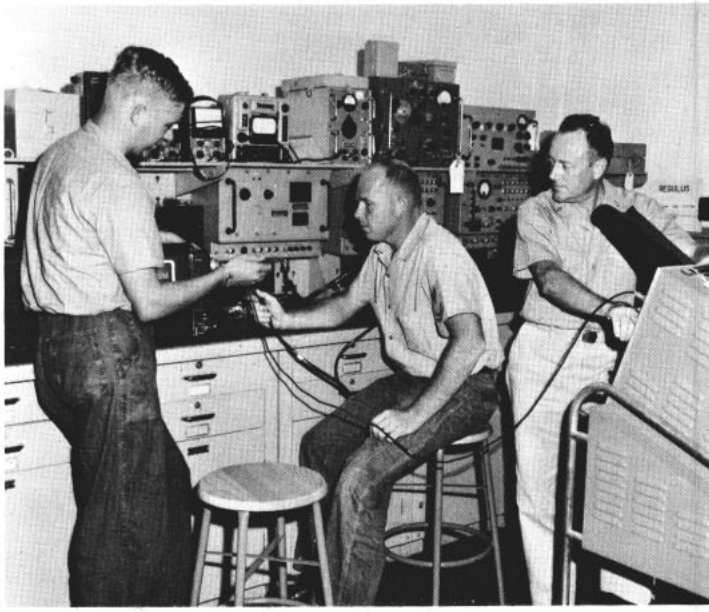
A new replenishment-at-sea system which uses an "M" frame has been developed by the San Francisco Naval Shipyard. It may replace the booms and masts in years to come.

The "M" frame is a literal description. It is low, and has a sliding block-and-ram tensioner that reduces weight and cost while increasing cargo handling efficiency.

During a six-week testing period, the equivalent of two years of normal replenishment at sea was done by the reefer USS *Aludra* (AF 55) and the ammunition ships USS *Firedrake* (AE 14), *Mount Baker* (AE 4), and *Haleakala* (AE 25). A demonstration was also held for CNO representatives during which USS *Vega* (AF 59) and *Haleakala* operated together for two days and nights. The ships transferred many different kinds of cargo under varied sea conditions.

At the conclusion of the two-day demonstration, the CNO representatives commented that the "M" frame had operational capabilities equivalent to the counterweight system used on most AEs, yet far superior in ease of hookup, flexibility of operation, emergency breakaway, simplicity of design and economy of space and weight.





MISSILEMEN STUDENTS operate dials of control boards, and (rt), check out controls for a simulated missile flight.

Regulus Missile School

A newcomer to the Submarine Base, Pearl Harbor, is the Navy's *Regulus* Missile School. Before its move in mid-1960, the school had been located at the Guided Missile School, Dam Neck, Va.

Training hardware valued at $200,000 was shifted during the move. Included were a cutaway model of a J-33 turbojet engine, a mock fuel system, a dummy hydraulic wing setup, and a complete landing gear assembly.

The school trains officers and enlisted men in the theory, operation and maintenance of the *Regulus* missile and weapons system and provides the Fleet with missile officers for *Regulus* missile cruisers or guided missile submarines. At the school, technicians learn details of the *Regulus I* missile, with emphasis on ordnance, electronics and propulsion matters.

Three courses are taught. The six-week Surface-to-Surface Course is available to officers ordered to *Regulus* missile cruisers, guided missile submarines and various guided missile shore activities. Here they learn the steps needed for launching and controlling the missile—and what to do if a casualty occurs to the "bird."

The Guided Missileman Class "C" Course is 10 weeks in length. It is adapted to teach graduates of the Class "A" Guided Missile School.

Covered in this course are the basics of the guidance system, the propulsion methods, the maintenance of the airframe, the hydraulics system, the fueling methods, radio command guidance and radar command guidance.

The Ordnance and Propulsion Course is six weeks long, and provides training for guided missilemen, torpedoman's mates, enginemen, gunner's mates, and electrician's mates serving with units conducting *Regulus* missile operations or having facilities for maintenance of the missile.

Quotas for the school are controlled by Commander, Submarine Squadron One. The instructors are members of Guided Missile Unit 10, at Pearl Harbor.

Senior instructor is Chief Guided Missileman W. H. Lyons, USN. He has been in the guided missile program since 1951. Chief Engineman J. B. Mahin, USN, another instructor, has been in the program since 1949, when he worked on the *Loon* project. Most of the instructors have been in the *Regulus* missile program since its start.

On 15 Jul 1953 the *Regulus* was first launched successfully, from USS *Tunny* (SSG 282). More than 1000 *Regulus* launches have since been made.

— Bill Neal, JO2, USN.

Guided Missile Destroyers

The Navy has ordered two more guided missile destroyers from a Seattle, Wash., shipyard.

Their cost, according to Navy officials, will be about one million dollars per ship less than any previous guided missile destroyer.

The two DDGs, part of the Navy's 1961 shipbuilding program, will be armed with *Tartar* surface-to-air missiles, antisubmarine rockets and torpedoes and conventional five-inch guns. Their armament, and communications, radar and sonar equipment will fit them for a role in antisubmarine warfare, air defense and amphibious operations.

Land-Based *Polaris* Launcher

A new feature at the Guided Missile School, Dam Neck, Va., is its land-based *Polaris* launcher. Functionally, it is a duplicate of the launchers carried by the Fleet ballistic missile submarines.

Shipped to Dam Neck from the West Coast, the launcher had previously been installed at the San Francisco Naval Shipyard. Construction at Dam Neck covered a seven-week period, at the end of which five successful firings were made.

The test firings consisted of two "no loads" and three *Sabot*-less operations, each of the three using a load of 3200 gallons of water. (A wooden plug is used in a *Sabot* firing.)

The brunt of the work was done by riggers from the Norfolk Naval Shipyard. For a while the riggers faced what seemed quite a problem—the handling of the inner and outer tubes. The former weighed nine tons and the latter weighed 40 tons. They solved it by setting the

outer tube in an upright position and then, with a very tall crane, inserting the inner tube into the outer tube.

Floating Labs

Two floating laboratories will soon be exploring the ocean's depths in search of ways and means to improve the Navy's antisubmarine warfare techniques.

To be known as Oceanographic Research Ships AGOR, they will be built in Sturgeon Bay, Wis. Each will be 208 feet long, and have a full-load displacement of 1370 tons.

They will have scientific laboratories and equipment aboard to study the ocean and its effect on sound transmission; test the environmental effects of the ocean on scientific and naval instruments, and gather background information. Special seakeeping and handling qualities to be built into the two ships will make them capable of very quiet operation.

MSTS will operate the ships, which will be manned by civilian crews.

The *Searchers*

Perhaps the most aptly named ships in the Navy are the radar picket ships – *Lookout, Vigil, Skywatcher, Outpost, Investigator, Guardian* . . . these are the names of some of them.

The AGRs form a key part of the electronic wall of defense maintained off our coasts. One of the eight ships of Radar Picket Squadron Two (homeported at the Construction Battalion Center, Davisville, R.I.) is USS *Searcher* (AGR 4).

Searcher and her sister ships, according to her CO, LCDR R. T. Bailey, USN, detect all aircraft flying across the Atlantic and inbound to the U.S. When detected, these aircraft are reported to a SAGE (Semi Automatic Ground Environment) headquarters, where the data is processed into a computer.

The data is then displayed and the reported aircraft evaluated as *friendly* or *unkown*. *Searcher* and her sister ships operate throughout the worst North Atlantic weather, thus ensuring that this continent's aircraft detection range is extended many hundreds of miles to sea.

Searcher is also fully capable of controlling USAF fighters in strikes against enemy planes before they could reach the coastline. With this ability she can fill both an offensive and defensive role in the protection of our country.

The "AGR" designation is a fairly new one. Before 28 Sep 1958 they were "YAGRs," meaning ocean radar station ships. By dropping the "Y" they entered the auxiliary vessel category from the service craft category. AGRs are former liberty-hull cargo vessels (Liberty ships). They displace 3600 tons and are 441 feet in length.

Searcher and her crew of 133 enlisted men and 13 officers recently departed Davisville, bound for one of five observation stations somewhere in the North Atlantic between Nova Scotia and southern Virginia. She usually remains on station 30 days.

Because of the monotony connected with such duty, the ship is well provided with facilities for relaxation. Among these are a well-stocked library, a gymnasium, a movie theater, a half-size basketball court and a hobby shop. In the berthing compartments each man has an individual bunk light and there is plenty of space between bunks. PO1s and the CPOs have their own quarters. During summer months, *Searcher* men set up a swimming pool that features continually circulating salt water.

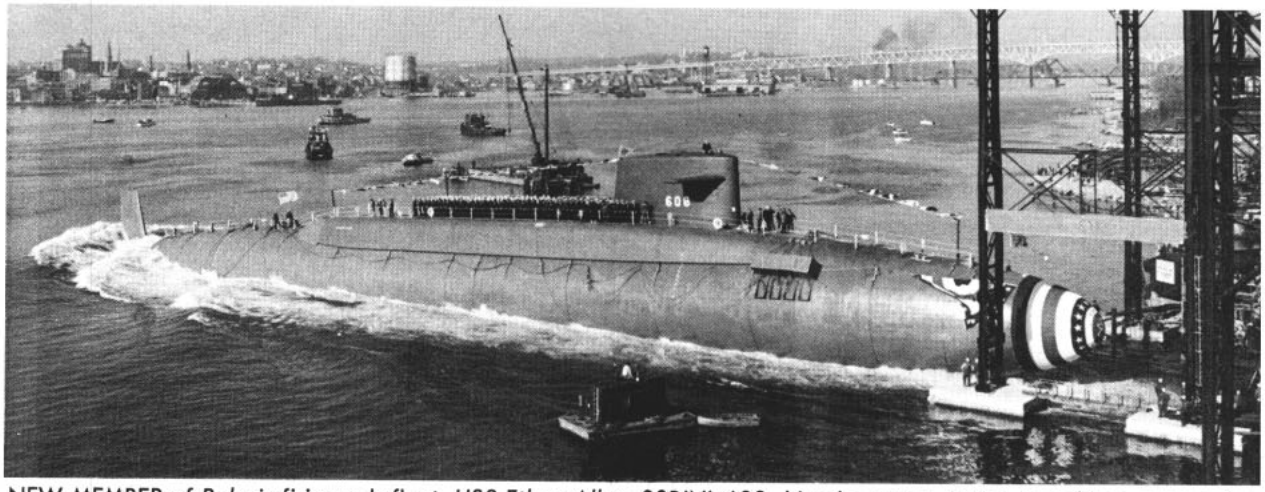
Everything detected by *Searcher's* electronic eyes is considered hostile until the massive SAGE computers report that the suspect is making a friendly premeditated appearance.

Should a hostile aircraft—any aircraft that has failed to file a flight plan—be sighted, the Air Force sends aloft land-based F-101, F-102 or F-106 fighter planes to determine if the suspect is flying off its flight plan or if it represents an actual threat against the U.S.

While on station, *Searcher* is under the operational control of the commander in chief of the North American Defense Command (NORAD). NORAD's net can, within 150 seconds of any initial enemy assault, elevate a blanket of weapons capable of destroying a large portion of the attacking force before it can reach target areas.

The Navy's role in NORAD began in 1955 when two radar picket squadrons were commissioned. Radar Picket Squadron One was based at Treasure Island, Calif., to extend radar coverage far off the West Coast. Radar Picket Squadron Two was based at Newport, R.I., to give similar coverage off the East Coast. Squadron Two later moved to the Construction Center at Davisville, R.I. — G. W. Terhune, JOSN, USN.

SEA WATCH—Crew members of USS *Searcher* (AGR 4) look for radar contacts in ship's Combat Information Center.



NEW MEMBER of *Polaris*-firing sub fleet, *USS Ethan Allen*, SSB(N) 608, hits the water during launching ceremonies.

Submarine News

Move over, all you car manufacturers – the Navy's bringing out a compact model too. USS *Tullibee*, SS (N) 597, the nation's first compact nuclear-powered attack submarine, has joined the Fleet.

Designed specifically for detecting and destroying enemy submarines, *Tullibee* is operated by the smallest crew of any nuclear sub–just six officers and 50 enlisted men. Only 273 feet long, she displaces but 2600 tons. The radar picket submarine *Triton*, SSR (N) 586, by comparison, is 477 feet long, displaces 6000 tons, and has a crew of 175 officers and men.

Small as she is, however, *Tullibee* is thoroughly equipped for her job. A good share of her, including most of her bow, is crammed with more sonar tracking gear and other detection equipment than that carried by all U. S. submarines, combined, in World War II. As a result she is the first submarine to carry torpedo tubes amidships rather than in the traditional forward positions.

She contains yet another nuclear submarine first too – closed circuit television. Because of the lack of space for the crew to assemble, TV cameras and receivers have been installed to show movies.

And while we're on the subject of submarines–here are some other recent newsworthy developments within the Silent Service.

• **Record Qualifier**

Peter Philip, Jr., ICFN, USN, has pulled off a stunt roughly comparable to completing a four-year college course in 18 months. A crew member of the New London-based submarine *Sarda* (SS 488), he qualified in submarines in just two and a half months.

The complete criteria for award of a submariner's dolphins are far too lengthy to list here. Briefly, qualification involves gaining a complete knowledge of every moving part throughout the submarine, plus a working knowledge of the submerging and surfacing techniques to be followed in any general area of the ship. Normally, it's a task which requires at least six months to complete.

• **Flasher Memorial**

The Submarine Veterans of World War II have launched a national fund drive aimed at collecting some two million dollars. With the money, they plan to erect a spectacular memorial to the submarine service and its dead.

One of the largest and most ambitious projects of this type ever undertaken by any veterans' organization anywhere, the memorial, as envisioned by the 6000-member SubVets, will contain the submarine USS *Flasher* (SS 249), which distinguished itself in World War II by sinking more than 100,000 tons of enemy shipping; a submarine library; a restaurant; tourist facilities; an auditorium; a non-sectarian chapel; a souvenir shop; small boat piers; a large parking area; and the group's National Headquarters.

It will be built on a five-and-a-half-acre plot near the Gold Star Memorial Bridge in Groton, Conn.

• **10,000th Dive**

Back in 1914 a brand new U. S. submarine left Portsmouth Naval Shipyard and made its first dive. Since that time there's been a lot of water over the bridge.

There's bound to have been–now 16 years old, and one of the Silent Service's senior citizens, USS *Toro* (SS 422) has become the third U. S. submarine to complete 10,000 dives. (*Spikefish* and *Sarda* preceded her.)

Submarine experts claim that achieving the exclusive 10-grand mark is about the equivalent of driving an automobile half a million miles. An added note for the statistically minded: During the 10,000 dives, an estimated three and three quarter million tons of sea water have passed through *Toro's* flood ports – approximately the same amount that flows over Niagara Falls every nine minutes.

After that maiden dive in 1944, *Toro* managed to reach the Pacific in time to participate in two war patrols. In recent years she has served mainly as a training ship for Submarine School students at New London, Conn.

• **Assistance Center**

The submarine force has long been famous for taking care of its own, and it plans to keep right on doing so in the case of the FBM submarines with their Blue and Gold crews.

Crew members of the Polaris-firing submarines, absent on long-submerged tours of oceanic sentry patrol, will be armed with the comforting knowledge that, should an emergency develop back home, help for their dependents will always be close at hand.

That help, be it financial or legal aid, or almost any assistance of an emergency nature, will be furnished by a newly established Personnel Assistance Center located at the Submarine Base, New London, Conn.

The PAC, staffed by a chief and first class yeoman, will also be able

to pass any important messages from dependents of Blue and Gold crew members to deployed ships.

• **English Hall**

A Fleet Ballistic Missile training facility which will furnish refresher training for Blue and Gold FBM crews has been dedicated and opened for business at the Submarine Base, New London.

Named English Hall, it honors the memory of the late Rear Admiral Robert H. English, who was commander of Submarine Force, Pacific, at the time of his death in 1943.

An oil portrait of RADM English, presented to the school by his widow at the dedication ceremonies, hangs in the building's foyer.

• **Subpac Memorial**

While the SubVets of World War II were getting a fund drive underway for their national shrine, the Pacific Submarine Force was dedicating a submarine memorial of its own at the Submarine Base, Pearl Harbor.

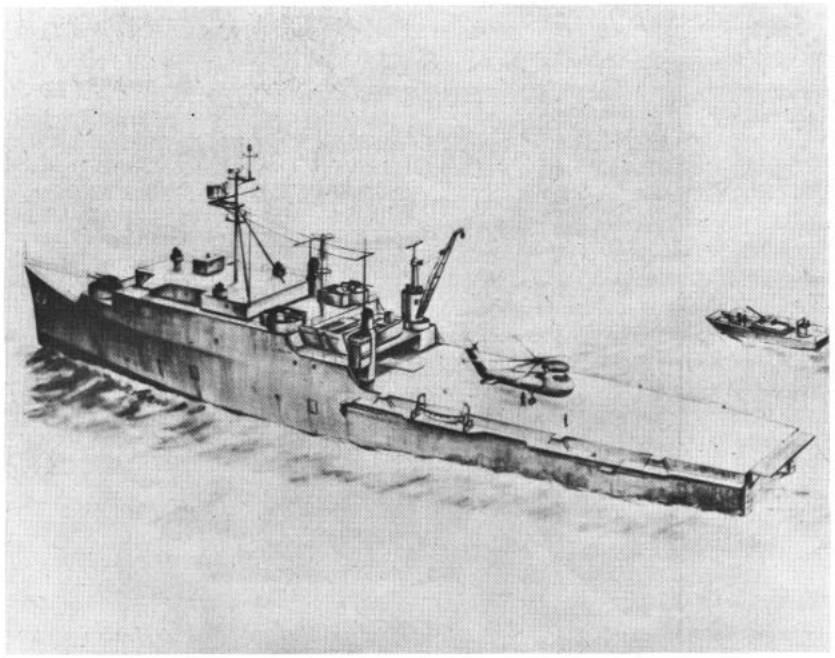
The Pearl Harbor Submarine Memorial sprung from the fertile imagination of Chief Torpedoman's Mate Robert (The Horse) Cornelius, USN, then attached to the SubBase, and since retired. Chief Cornelius was idly rummaging through a salvage pile on the Base one day, and discovered several bronze plaques which contained the names of submarines and crews lost during World War II. Why not, he thought, build a memorial to those lost ships and heroic submariners, based around plaques like these?

Both the idea, and the fund-raising appeal which followed, met overwhelming approval throughout the Submarine Force, and ground was broken for construction of the memorial in July 1960.

LPD — Amphibious Transport Dock

Keel-laying ceremonies at the New York Naval Shipyard marked the beginning of construction of the future USS *Vancouver* (LPD 2). The second of a new type of ship-Amphibious Transport Dock–*Vancouver* will carry the name of a city in Washington. The first ship of the type is *Raleigh* (LPD 1), also being built at the same yard.

The LPD is designed to combine the functions of both an attack transport (APA) and an attack cargo ship (AKA). By incorporating certain design features that proved successful in the *Thomaston* class LSD (dock landing ship), it will not be necessary for troops and their equipment to be separated, as they are now in AKAs and APAs.



NUMBER TWO—This is an artist's conception of the second amphibious transport dock, *USS Vancouver* (LPD 2), under construction at N.Y. Naval Shipyard.

Present difficulties in offloading troops and their gear over the ship's side will be eliminated by loading landing craft in the well and launching them through an opening in the ship's stern. Landing craft can be launched whether the ship is underway at slow speeds, or lying to.

Covering the well will be a deck that provides a platform for the large helicopters to be carried.

The ship's crew will number about 30 officers and 460 men. Displacing 8040 tons, the LPD will have a beam of 84 feet and a length of 521 feet. Four 3-inch/50 twin gun mounts will form her main armament. The LPD will carry nine LCM (6) landing craft and six troop-carrying helicopters.

Scheduled completion dates are March 1962 for *Raleigh* and June 1962 for *Vancouver*.

NUC for Two Ships

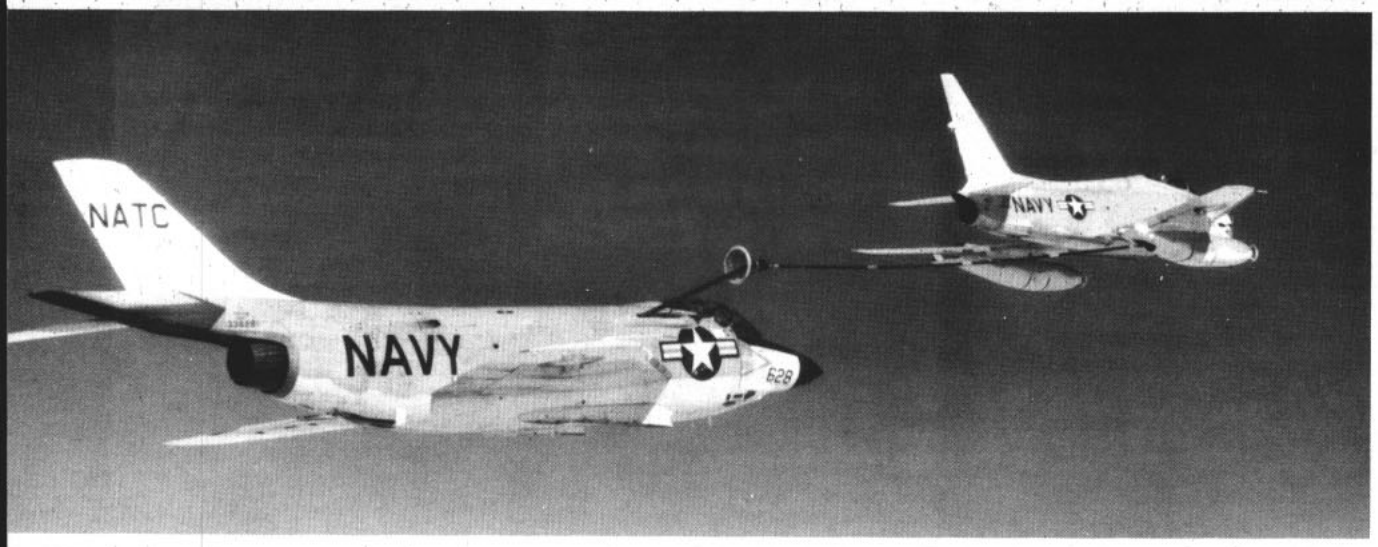
The Navy Unit Commendation has been awarded to two ships—USS *Observation Island* (EAG 154) and USS *George Washington* SSB(N) 598 —for their work in connection with the first successful firing of the *Polaris* Fleet Ballistic Missile.

Persons attached to or serving on board *Observation Island* during the period 3 Jan 1959 to 20 Jul 1960 are authorized to wear the Navy Unit Commendation ribbon. For those attached to or serving on board *George Washington*, the eligibility period is 19 Jun 1959 to 20 Jul 1960.

Observation Island's citation, signed by the Secretary of the Navy, stated that the ship "brilliantly performed the necessary afloat flight tests and conducted complex and demanding operations in the essential fields of navigation, communications and telemetry. The timely and successful conclusion of the afloat flight test program achieved by this vessel expedited the availability to the United States of the most potent of deterrent weapons."

George Washington's citation, also signed by SecNav, pointed out that the ship, "as the first Fleet Ballistic Nuclear Submarine, tested the newly created Fleet Ballistic Missile System and developed the techniques necessary to successfully launch the first ballistic missile from beneath the ocean's surface."

It continued: "On the afternoon of 20 Jul 1960, USS *George Washington* demonstrated to the world a new weapon of deterrence and pioneered a new era of seapower when she dramatically launched these missiles of hope for humanity. The countless technical and operational problems associated with this complex and unique weapons system were promptly and competently solved by the officers, crew, and civilian technicians assigned to *George Washington*."



DRINK'S ON ME—A Navy supersonic F3H-2N *Demon* interceptor is refueled while in flight by an FJ-4B *Fury*.

TAD to Outer Space

If they work it right, two Navy flight surgeons – LCDRs Glenn F. Kelly and Andrew W. Stevenson—may have the distinction of possessing the first set of travel orders directing them to outer space.

However, it will be strictly TAD, as their entire journey will be for a mere five days—hardly enough to get them more than a few light years away from the earth. No permanent change of duty station is contemplated.

They will take off from the Point Mugu headquarters of the Pacific Missile Range and when, at the end of the trip, they climb out of their capsule, they will find themselves right back where they started. To outside and objective observers, they will have never left the ground. However, as far as the new breed of astronauts are concerned, the trip will be for real.

The entire venture—strictly simulated—will take place in the Navy's new high-altitude partial vacuum chamber. The travelers will be kept at an atmospheric pressure equivalent to that of an altitude of 35,000 feet—about one-fourth the pressure at the earth's surface.

The most important objective of the experiment is to compute the tolerable artificial atmosphere for space travelers. Heretofore, experiments have shown that breathing pure oxygen at normal earth pressure for extended periods of time results in nausea and lung irritation. Experiments indicate that by reducing the atmospheric pressure by roughly three-fourths, pure oxygen apparently becomes tolerable to man.

If the men can effectively function in the partial vacuum of the space chamber, design complications will be lessened. The partial vacuum of the test capsule will exert a pressure of three-and-one-half pounds per square inch on the inside surface as opposed to 14.7 pounds per square inch at normal atmospheric pressure. If this partial vacuum is "physiologically acceptable," less reinforcing of a real space capsule will be necessary in order to keep it from flying apart from the stress of internal pressure while in the nearly absolute vacuum of outer space.

Monitors will observe the mental alertness and the ability of the men in the chamber to operate the controls that will remove carbon dioxide and body gases and keep the desirable amount of water vapor in the chamber's atmosphere.

The space chamber is entirely cut off from earth life. Although body functions of the men inside are completely monitored at all times and they are visible to their monitors, they cannot themselves see anything that is not in the capsule. The test is also expected to add considerably to our knowledge of the psychological ability of a man to adjust to complete confinement for an extended period of time.

Bexar's Been Busy

A travelin' ship is USS *Bexar* (APA 237), a unit of the Amphibious Force, U.S. Pacific Fleet. She has returned to the Pacific Fleet, after a tour with the Atlantic Fleet.

Bexar claims to have been the first U.S. Navy ship to participate in the delivery of United Nations forces to the Congo to help maintain the peace. In September, while serving with the U.S. Seventh Fleet, in the western Pacific, the big attack transport sailed for Djakarta, Indonesia. There she embarked the Garuda Dua Battalion of the Indonesian army.

Nine days later, with the ship's transit of the Panama Canal, operational control passed from the Pacific to the Atlantic Fleet. Following a brief stop in Capetown, South Africa, *Bexar* headed for Matadi, southwest of Leopoldville, on the Congo River. She then offloaded her embarked troops.

The return trip to the Pacific began when *Bexar* departed Matadi and headed for Lagos, Nigeria. Final African port to be visited was Monrovia, Liberia.

After departing Monrovia, *Bexar* cruised across the Atlantic to South America. Enroute to the Canal Zone she made goodwill stops at Port of Spain, Trinidad; and Cartagena, Colombia.

Blueprints by Cable or Radio

A new high-speed facsimile system has been developed under the sponsorship of the Bureau of Ships to transmit microfilmed engineering drawings or printed pages from one point to another. At the receiving end, it will then reproduce the enlarged image on translucent paper at the rate of 26 feet per minute.

It is anticipated that the system will overcome a serious distribution problem arising with construction

Don't Bother—This Is Just Another Story about a Rescue at Sea

To most readers, probably, rescues at sea are a dime a dozen—but not to the rescued. And that's why 11 Japanese fishermen have a particularly large soft spot in their hearts for the U.S. Navy these days.

They owe their lives to the sharp eyes of two pilots of a Midway-based Navy search and rescue plane, and to the courage and strength of two enlisted crew members of Midway's aviation rescue boat.

The rescued men were members of the 17-man crew of the fishing boat *Ebisu Maru*, which struck a submerged portion of Pearl and Hermes reef (some 85 miles east of Midway) and capsized. When first sighted by search plane pilots LCDR R. S. Johnson and LT R. F. Wood, the 11 exhausted survivors, suffering from exposure, dehydration, thirst and hunger, were floating in two groups, two-and-a-half miles from the wrecked fishing boat. Some of the group were clinging to a small air mattress, while the others were huddled on one of the boat's hatch covers. A twelfth man was already dead, while five others were missing.

The search plane dropped two rafts to the frantically waving men, and a radio message brought the yard tug USS *Topenebee* (YTB 373) and the rescue boat racing to the scene from Midway. They reached the area by late afternoon, but the rescue took some doing even then. That's where Navymen Kenneth Eckert, BM1, and W. E. Garver, FN, came in.

The castaways had drifted into a reef-surrounded lagoon, and Eckert and Garver had to paddle their small dinghy through treacherous coral-heads and reefs to reach them. Inside the reef a propeller was sheared off, and the two men were forced to row the rest of the way against a strong wind.

It was a rough haul, but they finally reached the two rafts and took them in tow. It had gotten dark by this time, and the situation was, in Eckert's words, "scary." Right about then, however, the hovering search plane dropped flares to illuminate the lagoon and smoke bombs marking the narrow channel, and Eckert and Garver were able to tow their charges over the reefs to safety.

Nine of the rescued men were loaded aboard *Topenebee*, and the other two aboard the rescue boat for the trip back to Midway. There they recuperated at the Naval Station hospital before being flown back to Japan.

diagrams and plans for Navy ships. A complete set of aircraft carrier blueprints, for example, may weigh as much as 300 tons.

The new system consists of a "scanner" which picks up images from microfilm, and a "recorder" which receives the images from the scanner, by cable or microwave radio transmission. The recorder can be situated a considerable distance from the scanner.

In a practical application, if recorders were placed in shipyards, and it was desired to have the yards all build the same type of ship simultaneously, the drawings for the ships could be sent from a single point (say BuShips, in Washington, D.C.) to each of the yards. The plans, received by all the shipyards at the same time, would be reproduced as prints 18 inches wide.

Other types of publications, such as instruction books, could be transmitted in a similar manner.

The new system is being evaluated for possible use at the Navy's 11 shipyards and at various other activities. It is expected that the system will greatly reduce mailing and shipping costs in many areas.

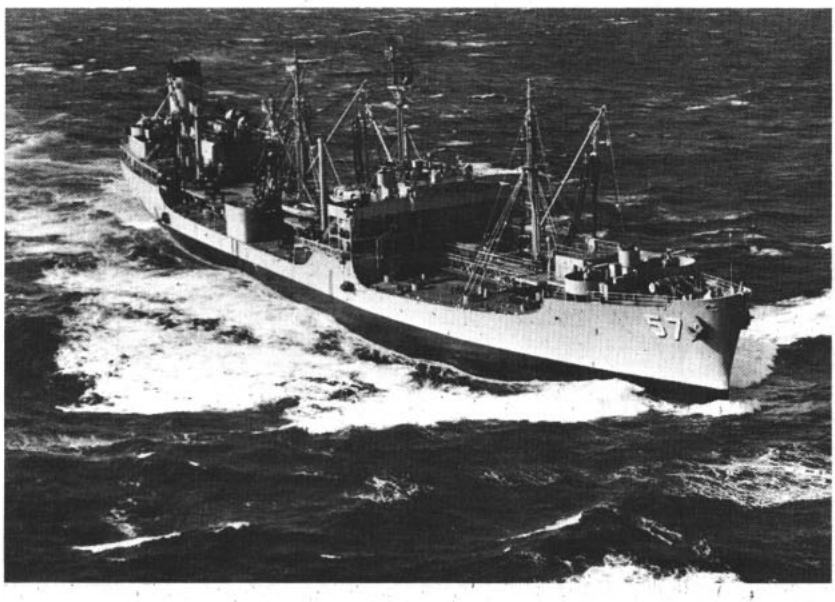
Trophy for Sunset League

Destroyer Force Atlantic's baseball team made off with the Newport, R.I., Sunset League title for the third successive year this past summer, and in so doing, took permanent possession of the league's championship trophy. The league will not be left empty-handed, however. When teams come out swinging in 1961, for the 43rd consecutive year in one of the oldest twilight hardball leagues in New England, they'll be battling for a handsome new perpetual trophy donated by DesLant.

The new trophy, a mounted sterling silver bowl like its predecessor, was presented to Newport's Recreation Director by RADM C. E. Weakley, USN, COMDESLANT, at a dinner aboard the force flagship, the destroyer tender USS *Yosemite* (AD 19). Also attending the dinner were several Newport officials and Sunset League team managers.

Service teams have completed in Sunset League play since 1921. The league's first service champion was the Naval Torpedo Station in 1922.

SOME PUMPER—Fleet oiler *USS Marias* (AO 57), homeported at Norfolk, Va., refueled ships 34 times in nine days while supporting a Fleet defense exercise.



Here's How to Take Prize-Winning Photos

Don't you wish that you had been one of the winners in the 1960 All-Navy Photographic Contest? Those who won did so for a good reason—they knew how to compete.

The judges in the 1960 contest felt that it was a good show. All the judges (the undersigned was one), however, felt that Navy would have been a hard-to-beat competitor in the Inter-Service Photographic Contest if a little more effort was made to improve the photographic techniques employed. There were many near-misses in the aim toward the winner's circle. In many cases, the subject matter was interesting but the presentation was stereotyped and weak.

With the idea of improving this situation, some of the faults noted in the competition have been compiled below, along with suggested remedies.

Fault No. 1. The picture contained too much. This is the most common fault in picture making.

Remedy: The viewer should be able to understand your picture at a glance. If the picture is cluttered it indicates clearly that the photographer doesn't have a clear idea of what he is trying to express. The eye is pleased by a clean, orderly presentation of your subject matter. Practice simplicity and try to reduce the elements of your picture to the least number that will tell your story. If you will make a moveable frame from two L-shaped pieces of cardboard and place these over your picture, you can quickly tell the size and shape your picture should be and exactly what you can eliminate to make it better.

Fault No. 2. Lack of imagination in picture presentation.

Remedy: Try always to picture your subject in a fresh, creative way. This you do by learning the uses of photographic techniques and materials so that you will have the tools to work with. Think about what there is in the picture that makes you want to take it; then emphasize that quality in the picture. Good pictures communicate an emotion to the viewer and arouse a response in him. Always avoid the obvious, easy approach. The obvious will always result in a weak, commonplace picture. Use every opportunity to view good photographs and see if you can determine why and how they were made. When you are thinking of a picture, imagine how it would look viewed from above; below; with different lighting, etc. Imagination can be developed only through use, and imagination is the payoff.

Fault No. 3. Several almost identical pictures entered by the same photographer.

Remedy: Don't expect the judges to do the selecting of your pictures for you. When you enter several

similar pictures, all of them are weaker than any one of them and hurt you in the competition. Pick your strongest entry and enter it.

Fault No. 4. Picture lacked impact.

Remedy: Impact in a picture is the command to look. Unless you can get the judges to give your brain child a second look, you'll never win.

Impact can be defined as anything in a picture that arouses an immediate response in the viewer. It is immaterial whether the viewer loves your picture or hates it, as long as he reacts to it.

A picture of a man brutally lashing an animal would create a feeling of anger in the person viewing it. A picture of a duck leading its young across a highway while the policeman holds up traffic causes the viewer to smile. Both pictures have impact.

Fault No. 5. Sterile, meaningless pictures.

Remedy: Judges are human and like to be entertained. The simplest way to do this is to tell them a story. Unfortunately, many of the pictures the judges get to see are mere snapshots. Tell, in your picture, a story they can understand at a glance and you're in. For examples of this type of picture, look at the covers (photographs or paintings) of some of the leading national magazines. Look at the covers of ALL HANDS. These all originated in someone's imagination.

Fault No. 6. Very weak entries in the military and foreign categories.

Remedy: This weakness really surprised the judges. You should realize that any military photographic contest will almost certainly be judged by civilians. The way you live and work, commonplace though it might seem to you, might well be fascinating to them if you tell your story in a simple, uncluttered way. Ship life is full of pictures.

The same remarks are true also of the foreign pictures you take. Anything that is foreign has a certain appeal to us and most strongly if we can compare it to something with which we are familiar. Never show foreigners in a degrading light; they won't like it and the judges won't either. People are interested in people, and when you show how our foreign friends live, work and play, your pictures will be interesting to everyone.

Fault No. 7. Lack of technical quality in pictures.

Remedy: If you don't know how—learn how! As mentioned above, see as many good pictures as possible so that you can have a standard of quality. Study *good* photographic books.

To summarize:

Strive for simplicity in your pictures. The fewer elements they contain, the easier the pictures are to arrange. Good composition is merely a pleasing, orderly arrangement, in the picture space.

Move in on your subject until your view finder contains only the story you want to tell. Unity in a picture, with only one main subject, is the sign of a good picture. It amounts to this: If you want to be good at anything, you work hard at learning the ropes. Photography is no exception to this rule.

— John F. Meenehan

Tops in Touch Football

Sports history is liberally sprinkled with instances of almost complete domination of a sport by a particular team or individual.

A sample of such domination can be found in the six-man touch football team representing the submarine USS *Tang* (SS 563)—champion of the Pacific Fleet Submarine Force Intramural League for the third consecutive year.

Intramural football—Pearl Harbor Submarine Force variety—is broken up into two segments, afloat and ashore, with the two section winners vying in a best-two-out-of-three playoff series at season's end. This year, as in the two previous campaigns, *Tang's* hustling crew swept aside all comers in the Afloat Section, then blasted the "Heats," holder of the Shore title, 42-6 and 60-6 for the over-all Intramural League crown.

In 10 games the *Tangmasters* piled up 442 points and restricted their opponents to just 26, while running their combined 1958-59-60 record to 26 wins in 28 games.

Tops among several good reasons for that sparkling record has been the coaching of LT James W. (Doc) Blanchard, USN. An All-American lacrosse star at the Naval Academy in 1956, Doc shone as the passing quarterback while player-coaching the 1958 and 1959 *Tang* editions, but eased himself out of an active playing role the past season to do his master-minding from the sidelines. He could afford to do so—he had "most valuable player" Bob Coleman ready to step in as this year's quarterback. All Coleman did was toss 30 touchdown passes in the 10 games.

There were other good reasons too. One was the strong and enthusiastic backing provided by *Tang's* CO, LCDR John O. Coppedge, USN, an ex-Naval Academy football hero in his own right, who coached the Academy plebe team from 1954 to 1957.

Another was the loyal rooting of practically 100 per cent of *Tang's* crew and their dependents. Some of the crew even went so far as to organize their own band to play at all of their team's games.

Individual honors for the 1960 team went to Chuck Robb who scored 84 points. Bob Coleman was voted the most outstanding player and was the team's leading passer.

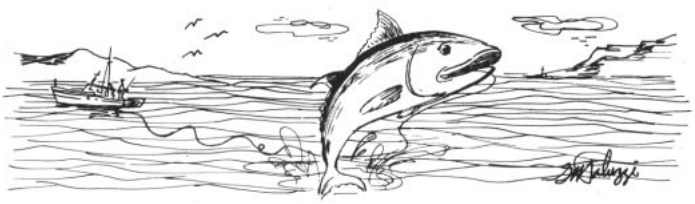
SIDELINE STRATEGY

MOST MEN, we've noticed, if they're fishermen at all, are avid fishermen. There just doesn't appear to be any room in the sport for the bored or half-interested types. It follows that this holds true among Navymen too—it must, because so many sailors we've met have turned out to be dedicated anglers.

Some have more success than others, however. And the champ, so far as we're concerned, both for single-minded devotion *and* success, is a veteran chief yeoman attached to the Naval Amphibious Base, Coronado, Calif.

His name is Harry Bonner, and his accomplishments with rod and reel have made him a legend in his time around the San Diego area. An overflowing trophy room stuffed to the gills with plaques, certificates, medals and trophies, plus an even more tangible award—a new car parked beside his home—make it evident Chief Bonner hasn't suffered much from that strange malady known as "fisherman's luck" over the years.

Late this past summer, for instance, Chief Bonner achieved an ultimate in deep-sea fishing. Using a combination of ultralight spinning tackle and 300 yards of six-pound test monofilament line, he landed a 25-pound, 2-ounce albacore which was a world-record catch with that type of gear.



It was a battle worthy of an angler of Chief Bonner's talents. On at least three occasions the fighting albacore's spectacular runs zipped off more than 275 yards of line before the chief succeeded in checking him. The whopper had to be brought to gaff six times before he could be boated.

Knowledgeable fishing people say that Chief Bonner's feat was roughly comparable to that of hog-tying a wild steer with light twine. The albacore, it seems, is one of the real tigers of the deep—the previous world's record landed on that type of gear, weighed just over 18 pounds.

Chief Bonner got an embossed certificate from the International Spin Fishing Association in recognition of his record-setting catch. It was old stuff to him—in 1960 alone he qualified for more than 40 button awards from the ISFA; won six Yellowtail Honor Badge Awards in a national fishing contest; qualified for a first place weekly award in the San Diego Yellowtail-Albacore Derby; copped a first place award in the Sportsman's Club Weekly Awards competition; qualified for two sportfishing awards in the Orange County Derby at Newport Beach; won a first place trophy for best individual catch in the El Toro Tournament, and sparked the CRUDESPAC Angling Team to a second place in the meet.

Some other Bonner achievements of past years: First places in annual international fishing contests in 1957 and 1959; six Sportsman's Club awards, and a first place in the yellowtail division in a national magazine's 1956 fishing contest.

— G.F.M., JO1, USN.

THE WORD

Frank, Authentic Advance Information On Policy — Straight From Headquarters

• **TRAVEL RESTRICTIONS** — As a general rule, enlisted personnel will not be granted leave enroute to a school on TAD, and in most cases they will be ordered to report to the school no earlier than the day before the school convenes.

This new policy was adopted because of the limitations on travel funds which have been imposed for this fiscal year. In Alnav 31, which was issued some time ago, the travel funds were said to be several million dollars short of a "bare minimum" requirement. It further stated that commands should avoid using TAD orders which involve weekend layover or leave.

Restrictions on travel were first announced in BuPers Notice 1510 of 21 Nov 1960.

• **DEPENDENTS OVERSEAS** — One step in the seven-point program aimed at partially stemming the adverse outflow of U.S. gold into foreign areas is the gradual reduction of the number of military and civilian dependents in foreign countries from some 484,000 to not more than 200,000.

The order applies strictly to foreign countries—overseas areas which *will not* be affected are Alaska, Hawaii, Canal Zone, Marianas, Marshall Islands, Midway Island, Puerto Rico, Samoa and the Virgin Islands.

Studies and consultations with commands affected are currently being carried out to determine exactly how this reduction program can best be accomplished. In general, however, here's what's in store for the Navy.

There are at present somewhere between 33,000 and 40,000 Navy dependents in foreign countries. This number must be more than cut in half by 31 Jul 1962. As far as possible the Navy plans to accomplish this reduction through:

- Normal tour termination.
- Return of some sponsors before completion of a normal tour.
- Curtailment of the number of dependents proceeding overseas.

Navy officials say the reductions are going to be made impartially with regard to officer and enlisted personnel. Chief aim of the studies currently underway will be to determine in which overseas billets and areas the presence of families will be necessary and in the best interests of the government.

ADM Arleigh Burke, Chief of Naval Operations, has this to say on the subject:

"We have overseas upwards of 40,000 dependents. Many are with people who must have their dependents with them in order to do their job—naval attaches, chiefs of MAAGs, heads of MAAGs and Missions, and the like—where a wife is a great asset.

"We have to reduce the number of dependents overseas by about 50 per cent or a little bit more. What we propose to do is try to decrease them by not sending any more dependents overseas. When we relieve an officer or enlisted man now we will try to accompish it with someone who has no dependents, or someone who can leave his dependents home, or we will tell him he can't take his dependents along. If we can't cut down enough that way, we will have to select people and bring them home. What we will try to do is bring people with dependents home sooner than their normal cruise is up, and replace them with bachelors if we can. Bachelors will be in great demand in all the services.

"The thing we will have to be most careful about is to not do an injustice to an individual. We will try not to."

If you are now in possession of a set of orders to any area affected by the reduction, you may still be accompanied by your dependents if your orders so state, and if their scheduled date of departure from CONUS is on or before 31 Jan 1961. A note of caution, however—in view of the upcoming big reduction in the numbers of dependents overseas, and the resultant decrease in the facilities for their support, you may want to think twice about having them leave the U.S.

All sets of orders which have been issued since 17 Nov 1960, and all which will be issued in the future, contain specific authority for or prohibition against travel by dependents at government expense. Orders issued earlier than 17 Nov 1960 which require travel after 31 Jan 1961 will be modified in the few special cases where it is determined that dependents will be authorized at the overseas area.

• **LAUGH, CLOWN, LAUGH** — It's time again to submit your cartoons to the Sixth All-Navy Comic Cartoon Contest. The rules are the same as for the preceding years and are applicable to active duty naval personnel and their dependents.

Entries were originally required to be submitted in time to reach the Chief of Naval Personnel (Attn: Pers G11) for judging by 1 Mar 1961. However, because of numerous requests this deadline has been extended to 25 Mar 1961.

HAVE A HEART—Remember nine other shipmates are waiting to read this issue of ALL HANDS. Pass this copy on.

Rules governing the contest were published in BuPers Notice 1700 of 18 Nov 1960. They provide that:

- All naval personnel on active duty and their bona fide dependents are eligible to submit entries.
- Comic (gag or situation) cartoons, to be acceptable, must have a Navy theme or background and must be in good taste.
- Cartoons must be in black ink on 8-by-10½-inch white paper or illustration board.
- A contestant may enter as many cartoons as desired but each entry must contain the following information and statements securely attached to the back of the entry:

Full name of originator.

Rank/Rate.

Serial/File number.

Duty station.

Hometown and hometown newspaper.

Command Recreation Fund administrator.

A brief statement certifying the cartoon as original.

Commanding officers indorsement "Forwarded," signed by either the commanding officer or his representative.

Type the following statement and sign — "All claims to the attached entry are waived and I understand the Department of the Navy may use as desired." Signed . . . (Name of contestant)

Dependents should supply appropriate data above and should make this statement: "I am dependent of (Name, Rate/Rank, etc.)

Trophies, furnished by the Chief of Naval Personnel, will be forwarded to the respective commanding officers for presentation to the winners of the first five places. The winning cartoons, plus other leading entries, will be published in ALL HANDS magazine and suitable notation will be made in the Special Services Newsletter.

• **E-8, E-9 ADVANCEMENTS** — The number of senior chief petty officers (E-8) and master chief petty officers (E-9) has been more than doubled as a result of Navy Department selection board actions. A total of 4051 Regular Navy and active-duty Naval Reservist chief petty officers were selected to be advanced on 16 Dec 1960. Of this number, 3208 were selected for E-8 and 842 were selected for E-9.

Before 16 December the on-board count had been 577 master chief petty officers and 3181 senior chief petty officers. Prior to advancement, the new E-8s agreed to remain on active duty for two years after promotion. For the new E-9s a three year active duty agreement was required.

Physical examinations are given to those selected, following the selections, to determine if they are qualified to perform the duties of the new grade. This repeats a procedure begun in the 1959 E8/E9 advancements.

In addition to the above selections, 298 inactive Naval Reservists have been selected for advancement to senior chief petty officer. For the inactive Reservists the eligibility requirements were substantially the same as for the active duty Reservists.

There have been no selections to master chief petty officer grade among the inactive Naval Reservists. However, as the new E-8s gain sufficient time in grade, they will have the E-9 advancement opportunity open to them.

• **WANT TO BE A BLUE ANGEL?** — If any of you hot-shot naval aviators desire to become part of the Navy's Blue Angels, you may now have the opportunity.

The Navy flight demonstration team is not short of pilots now, but it must have a backlog of applicants to be able to select the very best men for the team.

Interested naval aviators should write to the Officer in Charge, Navy Flight Demonstration Team, U.S. Naval Air Station, Pensacola, Fla.

It is also a good idea to indicate your desire to join the team on the Officer's Preference and Personal Information Card (NavPers 2774). Squadron and air group commanders have also been asked to recommend suitable aviators.

Don't request duty with the Blue Angels if you want a soft shore-duty billet. These men are on the road some nine months of the year and they practice many hours between shows.

As a Blue Angel you must be the ideal naval aviator. Your appearance, personality and behavior must be above reproach.

You may be asked to appear on radio or television and discuss not only your work in the Blue Angels, but also naval aviation in general. After all, the idea of the team is to interest young men in naval aviation.

QUIZ AWEIGH

Basic first aid is a subject in which a little knowledge can be a mighty useful thing. It's also the subject of this month's quiz.

1. Morphine, if used properly and at the right time, is a helpful drug. In cases of severe injuries or burns it should be given (with a syrette) to stop pain and prevent shock. The effects of a morphine syrette will last (a) three to four hours, (b) five to seven hours, (c) eight to 10 hours.

2. Heatstroke is a serious condition which results from a failure of the body's heat-regulating mechanism. Another name for heatstroke is (a) heat prostration, (b) sunstroke, (c) heat pains.

3. Even though a person may appear to be dead, if there's any doubt at all, artificial respiration should be attempted. It should be started as soon as possible—and, unless the patient is pronounced dead by a doctor, it should be continued for at least (a) one hour, (b) two hours, (c) four hours.

4. Burns are classified according to the depth of injury to the body's tissues. A burn that raises a blister is of which degree? (a) first, (b) second, (c) third.

5. When a person is being treated for shock, his *position* is the most important consideration (followed by the *application of heat and stimulants*). If the patient is lying on a bed, bunk or cot, the foot of it should be higher than the head by about (a) 18 inches, (b) 24 inches, (30 inches.

6. In the case of heatstroke, which of these three steps should *not* be taken? (a) Remove the victim to a cool place. (b) Give him stimulants. (c) Take off his clothing.

7. A compound fracture is one in which (a) a broken bone has torn through the flesh, (b) a bone is broken in two or more places, (c) connecting bones are broken.

THE BULLETIN BOARD

Pointers on the Fleet Reserve for Navymen Nearing Twenty

You may transfer to the Fleet Reserve with less than 19 years' and six months' day-for-day service.

You need not serve out your enlistment before you transfer to the Fleet Reserve.

But, enlisted men who are former officers may not, as a general rule, go into the Fleet Reserve with officer status after only 20 years' service.

These are just a few of the areas that seem to confuse men preparing to transfer to the Fleet Reserve. Here are some questions—with the answers—that are frequently asked. Maybe you have wondered about some of these points yourself.

• *Just what is the Fleet Reserve?*

It is a force of former warrant and commissioned officers and enlisted men who have left the Navy after at least 19 and one-half years' active duty, but less than the 30 years' service (active and Fleet Reserve) needed to retire. These men may be recalled in a war or national emergency, and are subject to the Uniform Code of Military Justice. During the years in the Fleet Reserve, Navymen draw retainer pay, not retired pay. Unless he has held temporary officer rank, however, his pay upon transfer to the retired list after completion of 30 years' active and inactive service will be the same as his Fleet Reserve retainer pay.

• *What is constructive service?*

The term "constructive service" refers to service for which credit is given although not actually performed. Constructive time may be accumulated if you are discharged with less than three months left on your enlistment (you are credited with a full four or six years in this case), or, on a minority enlistment, when you serve less than four years, but are credited with a full four-year enlistment. While constructive service may be used as a percentage multiple when figuring retainer pay, it may not be used to increase basic pay.

• *What happens if I go into the Fleet Reserve with 19 and one-half years' service and become disabled with less than 30 per cent disability before I complete 20 years?*

You would be placed on the retired list at the same rate of pay. You would not get severance pay.

• *Are there now any restrictions on men who want to serve more than 22 years' active duty?*

No. The Chief of Naval Personnel lifted that restriction completely, several months ago. Nothing prevents you from serving more than 22 years if you are qualified for reenlistment.

19 Plus 6 Equals 20 For Fleet Reservists

In case you haven't heard, the Comptroller General of the United States has determined that it *is* legal to credit a fractional year of six months or more as a full year of service for basic pay purposes when computing retainer pay for transfer to the Fleet Reserve.

As a result of the decision, the Navy can now return to its former practice, which had allowed the fractional year to count as a whole one. During the period of indecision, however, Navymen who had already submitted their papers for transfer to the Fleet Reserve were allowed to remain on active duty to complete 20 years of service for pay.

Navymen whose transfer to the Fleet Reserve had been deferred because of this action may now be transferred on the original date authorized or on the earliest practicable date thereafter. Those men who wish to remain on active duty for the period for which their transfer was deferred may do so.

If you have already transferred to the Fleet Reserve, and are receiving reduced retainer pay as a result of the previous Comptroller General Decision, your pay will be recomputed without further action. For details, see SecNav Note 1830 of 25 Nov 1960.

• *I plan to reenlist five months before I complete my 19 and one-half years service. How much of this enlistment must I serve before I can transfer to the Fleet Reserve.*

There is no minimum time you must serve. BuPers Inst. 1830.1A, however, suggests you submit your request for transfer to the Fleet Reserve one year in advance. In any event, at least six months' notice is required in order to obtain a relief.

• *I have spent eight and a half years as a warrant officer and I am approaching 20 years' service. Can I go into the Fleet Reserve as a CWO at that time or will I be reverted to my permanent CPO rating?*

If you are serving in warrant grade, you may be retired as a warrant officer when you complete 20 years' active service without regard to length of service as an officer. An officer who holds the rank of ensign or above must serve at least 10 years as a commissioned officer to retire in grade after 20 years of active service. If he wishes to retire after 20, but with less than 10 years' commissioned service, he must revert to his permanent enlisted rate, receive retainer pay in that rate until he has a total of 30 years' service (active and Fleet Reserve), and then be advanced on the retired list to the highest rank held. His pay would then increase accordingly.

• *The* BuPers Manual, *article C-13405, states that when transferred to the Fleet Reserve, a man may be eligible for an additional 10 per cent retainer pay if he was decorated for extraordinary heroism. I was so decorated; how can I get it?*

If you were so decorated, paragraph four of the authorization for transfer to the Fleet Reserve (NavPers 631) you receive from BuPers will include a statement: "Was reported for extraordinary heroism in line of duty." This will get you the extra money—no further correspondence is needed.

• *A man in my unit was recently reduced in rate, but retained on active duty. Since he is now ready for*

transfer to the Fleet Reserve, will his retainer pay be computed at the present or former rate?

His retainer pay will be based on the basic pay he is receiving at the time he transfers to the Fleet Reserve. Even after 30 years' service his pay remains the same. The law specifies that a man may be advanced on the retired list with the highest *rank satisfactorily* held–it says nothing about highest *rate* held.

• *I enlisted for a minority cruise in January 1941 and at the end of my enlistment in March 1944 I extended my enlistment for two years. Since I didn't actually reenlist, will that minority cruise still count as four years for constructive time?*

Yes.

• *Is there any difference in the retainer pay between 19 and one-half years day-for-day service and a full 20?*

No. For computing service for transfer to the Fleet Reserve, and for basic pay purposes, six months or more counts as a full year.

• *How do I compute retainer pay, when constructive service is involved?*

Multiply 2 and one-half times the number of years of service (including constructive time), and then multiply that answer by your basic pay at the time you go into the Fleet Reserve. (This must be your actual basic pay; constructive service cannot be used to increase the amount of basic pay.) If, for example, you have 20 years' service, including constructive time, and you are drawing pay as a CPO with over 18, here's how it would work: Two and one-half per cent times 20 years' service (including constructive time) is .50. Multiply this by $340 (basic pay for over 18), and you get $170 – the monthly amount of your check.

You may have other questions about the Fleet Reserve, but these are the ones most frequently asked.

Correspondence Courses for Officers, Enlisted Personnel

Four new correspondence courses – three enlisted and one officer course–have been issued by the Bureau of Naval Personnel, and two officer and six enlisted courses have been discontinued.

New enlisted courses are: ***Parachute Rigger 1 and C*** (NavPers 91606); ***Aviation Boatswain's Mate 1 and C*** (NavPers 91673); and ***Aerographer's Mate 3 and 2*** (NavPers 91664-1). The new officer course available is ***Guided Missiles and Nuclear Weapons,*** Part One (NavPers 10924-A).

Enlisted courses discontinued are: *Aviation Boatswain's Mate,* Vol. 2 (NavPers 91655-C); *Parachute Rigger,* Vol. 2, (NavPers 91641-C); *Aerographer 3* (NavPers 91663-A); *Aerographer 2* (NavPers 91664-A); *Machinist's Mate 1* (NavPers 91503-C); and *Machinist's Mate Chief* (NavPers 91504-A). Officer courses discontinued are *Navy Real Estate Law* (NavPers 10989-1) and *Guided Missiles Orientation* (NavPers 10924).

NavPers 91664-1 and 10924-A may be taken for repeat Naval Reserve credit.

All-Navy Cartoon Contest
LT B. E. Lodge, USN

"Good morning Sir, ship's boarding party ready for inspection."

Nuclear Power Training Is Offered for Officers

As nuclear power comes to the surface in today's Navy, the need for officers trained in the operation of the power plants increases. The young officers who grow up with these nuclear-powered surface ships may very well be the commanding officers in tomorrow's nuclear Navy.

BuPers Inst. 1520.68A, the current

WHAT'S IN A NAME

Squared Away

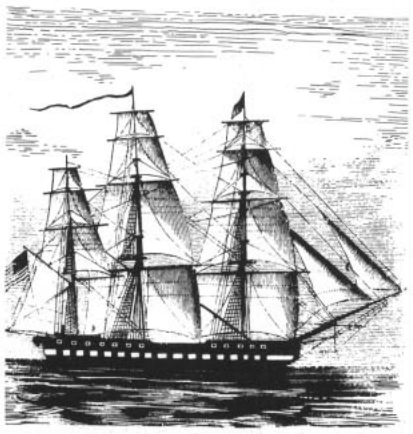
When a senior petty officer tells you to square away, you know precisely what he wants. He expects you to put the situation right.

Square away is everyday language for U.S. Navymen throughout the world. The two words are used in many instances, but they always mean the same thing. If a sailor is fouled up, or if he is out of uniform, he is told to square away. If his compartment is not shipshape, he is told to square it away. The list is almost endless, but in all cases, square away means to put the situation right.

The expression no doubt stems from the days of sailing ships when the seamanlike appearance of a ship was judged to a large extent by her rigging. Square yards were absolutely essential for a shipshape-appearing ship. To permit the yards to be cockbilled was a disgrace. In the earlier days of the Navy, cockbilled yards were a sign of mourning.

A schoolmaster aboard the old USS *Constitution,* records Lovette's *Customs and Traditions,* once described the routine aboard that ship after ex-presidents Jefferson and Adams died: "Our flags have been at half mast all day . . . Twenty-one guns were fired, first by this ship, and then by the *Porpoise* . . . At the first gun, each ship cockbilled its yards. I will explain the term as far as I am able. On common occasions, the yards are kept at right angles with the mast; and to a sailor's eye, nothing looks so slovenly as a different position; and nothing is noticed sooner, or sooner disgraces a ship. The slings, however, had now been loosed, and at the first gun, every yard was thrown into a slanting position, so as to form an angle of about 70 degrees with the horizon, the lower main yards inclining to starboard, the fore and mizen to larboard; while the upper yard of each mast took a direction contrary to that of the lower ones."

When the yards were put right, they were said to have been squared. Thus (probably) we have today's term "square away."



instruction on the program, states, "Line officers who enter into this program will remain unrestricted line officers in every sense (retain their line designator), their sea-duty promotion requirements will be safeguarded, and their command opportunity in the nuclear-ship Navy will be enhanced."

Insofar as practicable, all officers ordered to duty in the engineering departments of nuclear-powered surface ships will be graduates of the Nuclear Power Training Program.

Nuclear-powered surface ships currently under construction are uss *Enterprise*, CVA(N) 65; *Long Beach*, CG(N) 9, and *Bainbridge*, DLG(N) 25. The prototype of the power plants for the carrier and cruiser is operational at the National Reactor Testing Station near Idaho Falls, Idaho, and the prototype of *Bainbridge* will become operational during the summer of 1961 at Schenectady, N. Y.

Officers selected for the program undergo a one-year course which will include six months' academic as well as six months' operational training in nuclear propulsion.

The academic phase provides graduate-level study of mathematics, nuclear physics, reactor engineering and reactor plant technology. These courses are given at the Nuclear Power Schools in either New London, Conn., or Mare Island, Calif.

Operational training will be given on one of the prototypes. It will include detailed study of each of the systems of a pressurized water reactor plant and experience at each operator's station. Officers who complete the operational phase qualify as Chief Reactor Plant Operators.

Interested officers must meet the following requirements:

- Be a Regular or Reserve officer on active duty in the grades of lieutenant, lieutenant junior grade, ensign (LDO only) warrant officer (electrician or machinist only), or an NROTC or Naval Academy midshipman scheduled to be commissioned.
- Mathematics through calculus, and college-level physics (one year). These courses may have been taken at an accredited college or university, or through USAFI.
- Engineering experience prior to nuclear training is desirable, but not necessary.

Officers who complete the course of instruction will be required to remain on active duty for at least two years after completing the course, or for one year in addition to their normal obligated service, whichever is longer. Those men assigned to the program directly from the NROTC program must serve two years in addition to their normal obligation.

If you are dropped from the program at any time during the course, none of the time spent in training will count toward your normal obligated service.

Interested officers should get full details on the program from BuPers Inst. 1520.68A.

All-Navy Cartoon Contest
L. J. Felbinger, SN, USN

"Fine toss Seaweed, now just learn how to hold on to the end!"

New Percentage Tables List Rates for Navymen Under Survivor Annuity Plan

Now being distributed Navywide is NavPers 15945, a new *Tables of Percentage Reduction of Retired Pay and Conversion Tables Under the Uniformed Services Contingency Option Act*. It replaces an older publication of the same name published in 1953.

The new *Percentage Tables* brings several important changes to the option annuities program. The basic provisions and the four basic options remain the same, however. (See ALL HANDS, Dec 1960.) For the main part, the changes relate to three new tables that replace the two earlier (disability/non-disability) tables.

Under the new tables, retired members are divided into three main groups. They are as follows:

Group 1—If you retire after 1960 with 20 or more years of service you will be in this group. The retirement may be either of the physical disability type or of the non-disability type.

The rates (expressed as four digit reduction factors) in the new tables are less than one half of one per cent higher than the earlier non-disability rates.

As before, your election of an option annuity plan must take place before the end of your 18th year for pay purposes. Previously, however, you would *not* know well in advance of your retirement whether you would come under the non-disability rates or under the somewhat higher disability rates. Now the rates for those in Group 1 are the same for a disability retirement as for a non-disability retirement.

Group 2—If you retire after 1960 because of physical disability and have completed 17 years of service, but not 20 years of service, you will come under Group 2. As with Group 1, the rate increase averages out less than one half of one per cent above the previous rates – in this case, the earlier disability rates.

You will be in a somewhat special group if you made an election before 1 Jan 1961 and enter into disability retirement after that date, but before 1966, with less than 17 years of service. The earlier disability rates will also apply to you in such a case.

Group 3—If you retire after 1960 because of disability, and have less than 17 years of service and had not made an election before 1 Jan 1961, you are in Group 3. In this group you may make the election just prior to the time of retirement.

The rates in Group 3 are considerably higher than in the previous disability table.

When the terms "17 years of service" or "20 years of service" are used, "for-pay-purposes" years are meant. Thus, 17 years could mean 16½ years of active federal service.

The new rates are based upon six years' experience in the option annuities program, and in order that the program may operate on an actuarially-equivalent basis, and be more attractive for career personnel, the new rates and provisions have come into being.

If You Don't Do So Well In Advancement Exams, 'Profile Cards' Tell You Why

From now on, if you fail to be advanced in rate as the result of a Navy-wide examination, you will be told in what subjects you need to study.

Starting with the February 1961 advancement examinations, if you are not advanced, you will be told by the Naval Examining Center just how well you did on the examination in comparison to others who took the same test.

The information will be given you on an individual examination profile card. For purposes of evaluation, the examination will be divided into several subject areas. (The examination for QM1, for example, is evaluated in such subject areas as flaghoist, visual procedure, charts and logs, steering and sailing rules, time and timepieces and military.) In each subject area, which is listed as a number from 1 through 16 on the profile card, you will be given one of nine ratings from very low to superior. The key to the subject area numbers will be the last page of your examination booklet, which will be given to you on the day of the examination.

After each subject category on the key sheet are listed the item numbers from the *Manual of Qualifications for Advancement in Rating* (NavPers 18068) which lists the general requirements for your rating.

Profile cards will be distributed soon after the results of the examination have been published. The purpose of the card is twofold. First, it will show you the areas in which you, individually, should step up your study efforts, and second, it will indicate to your command the areas where it needs to give more instruction.

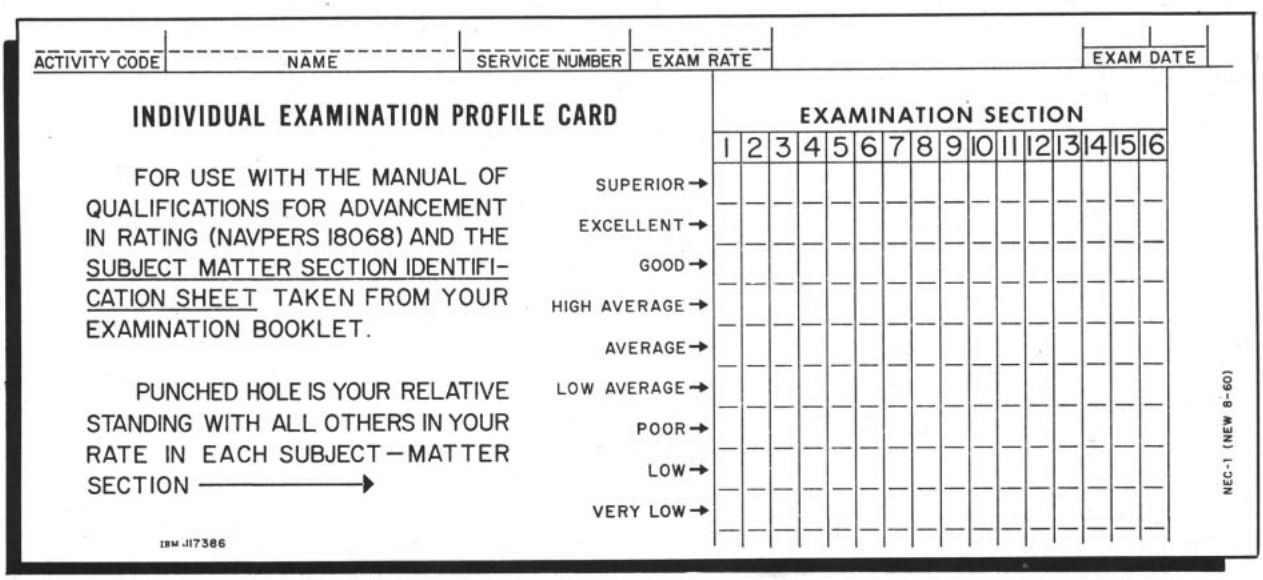
When interpreting the profile cards, the following considerations should be understood:

- The subject matter area identification sheet attached to the end of the test booklet can only be used for the examination which you took on that day. As the Quals Manual changes, the subject areas will change.
- The examination which you take does not cover all the qualifications for your rate. Certain qualifications are more important than others, and these will be stressed in the examination.
- Do not try to compare your profile card with men in a different rating. The subject areas for each rating are different and the relative standings of candidates in the various ratings may vary considerably. Your profile card only indicates your relative standing by subject matter areas with all other men who took the same examination that you did. It does not reflect the multiple computation factors.

Remember, you'll get the key sheet referring to your rate after completing the exam. Keep it for reference.

EXAMINATION SECTION	SUBJECT-MATTER SECTION TITLE	QUALIFICATIONS COVERED (FROM NAVPERS 18068)
1	Flaghoist	L 1.01
2	Visual Procedure	L 2.01
3	Miscellaneous (Weather - Honors and Ceremonies)	B 1.02, B 2.01, K 1.01, K 2.01, K 2.03
4	Charts and Logs	C 1.01, C 1.02, C 1.04, C 2.01, C 2.05, C 2.06
5	Compasses and Compass Errors	E 1.02, E 2.01, F 1.02, I 2.03
6	Steering and Sailing Rules	G 2.02
7	Rules of the Road (Lights and Fog Signals)	G 2.01, G 2.03
8	Time and Timepieces	H 1.01, H 1.02, H 2.01
9	Visual Aids to Navigation	J 2.01, J 2.02, J 2.03
10	Celestial Navigation and Related Equipment	I 1.01, I 1.09, I 1.10, I 2.08
11	Piloting, D.R., and Electronic Navigation	I 1.03, I 1.04, I 1.05, I 1.06, I 1.08, I 2.02, I 2.05, I 2.06, I 2.07
12	Military	

NOW YOU'LL KNOW—Here is a sample key sheet (above) and profile card that will show you where you stand.



Next Rung up the Advancement Ladder Is in Sight for Many

Some 11,000 first class petty officers will be advanced to chief petty officer as a result of the Navy-wide examination for advancement in rating held this month. Last year, about 10,500 men were advanced to Chief Petty Officer.

Bureau of Naval Personnel officials expect to advance 70 to 100 per cent of the men who pass the exam for E-7 in 37 of 64 ratings. Only one rating, ship's serviceman, will have less than 10 per cent of those PO1s who pass advance to CPO.

The advancement opportunities are also good for men in other ratings. The actual numbers in each rating that may be advanced cannot be projected. However, the numbers who were advanced as a result of the August 1960 exam, together with the projected percentages for the February exam, may give you an idea of your chances.

The following are the actual numbers who were advanced as a result of the August 1960 examinations:

Rating	Passed for E-4	Advanced for E-4	Passed for E-5	Advanced for E-5	Passed for E-6	Advanced for E-6
GROUP I (Deck)						
BM	2208	375	1700	410	1108	340
QM	590	All	218	All	120	All
RD	1332	All	611	All	95	All
SM	611	All	299	All	80	All
SO	—	—	—	—	61	All
SOA	47	All	33	All	—	—
SOG	514	All	228	All	—	—
SOS	72	All	59	All	—	—
SOO	70	All	—	—	—	—
GROUP II (Ordnance)						
FT	—	—	472	All	145	All
FTA	277	All	—	—	—	—
FTE	5	All	—	—	—	—
FTG	11	All	—	—	—	—
FTL	114	All	—	—	—	—
FTM	181	All	—	—	—	—
FTU	29	All	—	—	—	—
GM	1183	780	677	305	540	206
GS	234	169	109	All	33	All
MN	21	All	50	25	51	20
NW	143	120	79	All	17	All
TM	449	All	201	All	142	100
GROUP III (Electronics)						
ET	—	—	762	All	112	All
ETN	678	All	—	—	—	—
ETR	566	All	—	—	—	—
ETS	7	All	—	—	—	—
GROUP IV (Precision Equipment)						
IM	48	30	20	All	15	11
OM	49	All	20	All	7	All
GROUP V (Administrative and Clerical)						
CS	1138	650	1339	300	930	215
CT	786	All	390	All	145	All
DK	303	219	161	63	145	30
JO	117	86	50	All	8	All
MA	159	130	105	60	41	25
PN	755	745	400	335	248	95
RM	1856	All	963	All	232	All
SH	791	108	560	56	382	38
SK	1335	1100	646	450	323	160
TE(RM)	—	—	—	—	13	All
YN	1933	1455	818	550	811	100
GROUP VI (Miscellaneous)						
DM	155	90	47	All	10	All
LI	99	20	55	15	23	5
MU	164	All	110	All	24	All

Rating	Passed for E-4	Advanced for E-4	Passed for E-5	Advanced for E-5	Passed for E-6	Advanced for E-6
GROUP VII (Engineering and Hull)						
BR	—	—	—	—	6	All
BT	1851	All	900	All	317	All
DC	356	310	259	225	308	59
EM	1531	All	860	All	274	All
EN	1493	All	676	600	478	235
IC	728	All	334	All	80	All
ML	19	All	15	8	8	All
MM	2327	All	1342	All	317	All
MR	402	All	206	All	48	All
PM	27	All	22	All	2	All
SF	—	—	—	—	321	105
SFM	486	All	189	136	—	—
SFP	454	All	224	164	—	—
GROUP VIII (Construction)						
BU	—	—	—	—	34	4
BUH	25	All	12	All	—	—
BUL	145	119	78	63	—	—
BUR	58	All	28	24	—	—
CE	—	—	—	—	15	All
CEP	39	All	25	All	—	—
CES	11	All	9	All	—	—
CET	13	All	17	All	—	—
CEW	49	All	28	All	—	—
CM	—	—	—	—	61	6
CMA	97	All	46	14	—	—
CMH	25	All	28	9	—	—
EO	—	—	—	—	121	12
EOH	66	All	81	37	—	—
EON	76	55	85	9	—	—
SV	26	All	10	All	2	All
SW	—	—	—	—	22	2
SWE	27	All	16	All	—	—
SWF	18	All	10	All	—	—
UT	—	—	—	—	30	9
UTA	4	All	14	11	—	—
UTB	7	All	7	All	—	—
UTP	67	All	38	20	—	—
UTW	11	All	7	All	—	—
GROUP IX (Aviation)						
AB	—	—	222	All	144	60
ABG	176	153	—	—	—	—
ABU	434	372	—	—	—	—
AC	—	—	—	—	105	33
ACR	12	All	11	All	—	—
ACT	217	All	92	All	—	—
ACW	154	All	77	All	—	—
AD	—	—	1361	750	1559	401

Rating	Passed for E-4	Advanced for E-4	Passed for E-5	Advanced for E-5	Passed for E-6	Advanced for E-6
ADJ	696	All	—	—	—	—
ADR	1105	All	—	—	—	—
AE	—	—	526	All	173	All
AEI	196	All	—	—	—	—
AEW	918	All	—	—	—	—
AG	394	340	187	All	29	All
AK	541	330	207	100	128	18
AM	—	—	—	—	317	290
AME	256	All	34	All	—	—
AMH	743	720	416	All	—	—
AMS	1290	1026	464	All	—	—
AO	537	All	385	All	294	140
AQ	—	—	168	All	34	All
AQB	150	All	—	—	—	—
AQF	204	All	—	—	—	—
AT	—	—	1331	All	195	All
ATN	922	All	—	—	—	—
ATR	658	All	—	—	—	—
ATS	262	All	—	—	—	—
PH	326	All	142	All	92	50
PR	59	All	76	All	55	37
TD	—	—	112	50	98	11
TDI	239	45	—	—	—	—
TDR	89	80	—	—	—	—
GROUP X (Medical)						
HM	2521	1546	1289	560	946	402
GROUP XI (Dental)						
DT	307	188	244	104	117	33
GROUP XII (Steward)						
SD	1762	150	951	95	607	65

The following tabulation indicates the advancement opportunities in the February 1961 examination.

The figure 1 signifies EXCELLENT opportunities exist and that 70 to 100 per cent of those who pass will be advanced. Figure 2 represents GOOD opportunities, with 40 to 70 per cent being advanced. A FAIR chance of advancement (15 to 40 per cent) is represented by the figure 3, while 4 means POOR chances exist and less than 10 per cent of those who pass will be advanced.

RATING	E-4	E-5	E-6	E-7
GROUP I				
BM	3	3	3	1
QM	1	1	1	1
RD	1	1	1	2
SM	1	1	1	1
SO	1	1	1	1
GROUP II				
FT	1	1	1	1
GM	2	2	3	1
GS	1	1	1	1
MN	1	2	3	2
NW	1	1	1	1
TM	1	1	2	1
GROUP III				
ET	1	1	1	1
GROUP IV				
IM	1	1	2	1
OM	1	1	1	1
GROUP V				
CS	2	3	3	2
CT	1	1	1	2
DK	1	2	3	3
JO	1	1	1	1
MA	1	2	2	1
PC	1	2	1	1
PN	1	1	3	2
RM	1	1	1	1
SH	4	4	4	4
SK	1	1	2	1
TE(RM)	—	—	1	1
YN	1	2	4	2
GROUP VI				
DM	2	1	1	3
LI	3	3	3	3
MU	1	1	1	1
GROUP VIII				
BR	—	—	1	1
BT	1	1	1	1
BC	1	1	3	1
EM	1	1	1	1
EN	1	1	2	2
IC	1	1	1	1
ML	1	2	1	1
MM	1	1	1	1
MR	1	1	1	3
PM	1	1	1	1
SF	1	1	3	2
GROUP VIII				
BU	1	1	4	3
CE	1	1	1	2
CM	1	3	4	3
EO	1	3	4	3
SV	1	1	1	1
SW	1	1	4	2
UT	1	1	3	2
GROUP IX				
AB	1	1	3	1
AC	1	1	3	2
AD	1	2	3	1
AE	1	1	1	2
AG	1	1	1	1
AK	2	2	4	2
AM	1	1	1	1
AO	1	1	2	1
AQ	1	1	1	1
AT	1	1	1	1
PH	1	1	3	2
PR	1	1	2	1
PT	1	1	1	2
TD	3	2	4	2
GROUP X				
HM	2	2	2	1
GROUP XI				
DT	2	2	3	2
GROUP XII				
SD	4	4	4	2

Five Rating Structures — SO, DM, SV, AC and AT — to Be Streamlined in March

The Sonarman (SO), Draftsman (DM), Surveyor (SV), Air Controlman (AC) and Aviation Electronics Technician (AT) rating structures will have a new look effective 31 Mar 1961, as a result of the latest changes approved by the Secretary of the Navy.

Sonarman (SO) has been revised to include the service rating of SOO (Oceanographer) at the E-5 level. The general service rating of Draftsman has been redesignated a general rating, and the title has been changed to "Illustrator Draftsman (DM)," while the emergency service ratings of DMS (Structural), DME (Electrical), DMI (Illustrative), DMT (Topographical) and DMM (Mechanical) have been disestablished at all pay grades.

The general rating of Surveyor (SV) has been disestablished at all pay grades, and a general rating of Engineering Aid (EA) has been established at pay grades E-6 through E-9. Two service ratings, EAS (Surveyor) and EAD (Draftsman) have been established at pay grades E-4 and E-5. The EA rating will be in the Construction Group (Group Eight) and will be open to advancement from the construction apprenticeships.

Aviation Electronics Technician (AT) has been redesignated a general rating in pay grades E-5 through E-9. The emergency service ratings and selected emergency service rat-

ings of ATR (Radar), ATN (Communications/Navigation Equipment), and ATS (Antisubmarine Equipment) have been disestablished in all pay grades. Four service ratings have been established at the E-4 level: ATR (Radar and Radar Navigation Equipment); ATN (Radio Navigation Equipment); ATS (Antisubmarine Warfare Equipment), and ATW (Airborne CIC Operator).

As for the Air Controlman (AC) rating, it has been changed from a general service to a general rating in all pay grades. The emergency service and selected emergency service ratings of ACT (Tower), ACR (Radar) and ACW (Airborne CIC Operator) have been disestablished in all pay grades.

As revised, therefore, the rating structures in these ratings will look like this:

Rating	*Appropriate Pay Grades*
SO (Sonarman)	E-9, E-8, E-7, E-6
SOS (Submarine)	E-5 and below
SOA (Airborne)	E-5 and below
SOO (Oceanographer)	E-5 and below
SOG (Surface)	E-5 and below
DM (Illustrator Draftsman)	E-9 and below
EA (Engineering Aid)	E-9, E-8, E-7, E-6
EAS (Surveyor)	E-5 and below
EAD (Draftsman)	E-5 and below
AT (Aviation Electronics Technician)	E-9 through E-5
ATR (Radar)	E-4 and below
ATN (Radio Navigation Equipment)	E-4 and below
ATS (ASW Equipment)	E-4 and below
ATW (Airborne CIC Operator)	E-4 and below
AC (Air Controlman)	E-9 and below

Changes in rating in equal pay grade will be handled as a routine administrative matter, and will be accomplished by COs of the men involved. The changes involve all petty officers and strikers, including Naval Reserve and Fleet Reserve personnel on *active* duty, and will be made in accordance with the below tables:

As will be noted from the above tables, in some instances COs are authorized to change an individual to one of two or more service ratings. The choice in each case will be at the discretion of the CO, who will consider your personal desires, along with your capabilities, experience, previous training and present duties, in arriving at a decision.

For example, if you are a draftsman (E-5 or below) now filling a billet in the operations office of any of the mobile construction battalions or naval construction staffs, or in a public works office outside the continental U.S., you might be considered for change from DM to EAD. If, however, you are now filling a billet in topographical mapping, preparation of specifications, materials estimates or materials testing, you might also be considered for change to EAD.

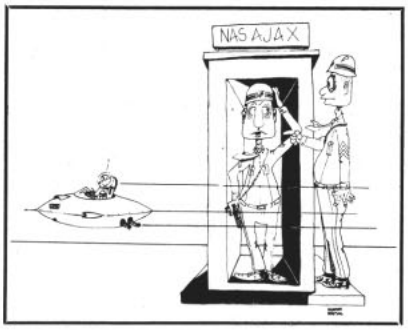
With one exception, the August 1961 Navy-wide advancement examinations will be the first to reflect these changes. The exception will be in the case of the exams for ATW3, which will be given in February 1961.

Change 16 to the *Manual of Qualifications for Advancement in Rating* (NavPers 18068) contains revised qualifications for the new rating structures. Enclosure (1) of BuPers Notice 1440 is a revised bibliography of training publications for advancement in rating, including mandatory Navy Training Courses.

If you are a candidate for advancement in any of the ratings discussed in this article, you must continue to complete mandatory training courses as indicated for the applicable pay grades, even though some of the courses cover the broad general rating rather than a particular service rating. This is because the Navy wants you to be familiar with the responsibilities of related service ratings even though you are being examined in your own service rating. If you are a candidate for advancement in a general rating you will be given an examination covering all service ratings within the general rating for which you are competing.

More detailed information can be found in BuPers Notice 1440 of 13 Dec 1960.

All-Navy Cartoon Contest
N. K. Rafsol, NW3, USN



"What could I do, Sarge? He had a base sticker."

Pay Grades	*From*	*To*
Draftsman (DM)		
E-6 and above	DM, DMS, DME, DMT, DMM	DM (Illustrator Draftsman)
E-4 and E-5	DM, DMS, DME, DMT, DMM	DM (Illustrator Draftsman) or EAD
Strikers	DM, DMS, DME, DMT, DMM	DM (Illustrator Draftsman) or EAD
All Grades	DMI	DM (Illustrator Draftsman)
Surveyor (SV)		
E-6 and above	SV	EA
E-4 and E-5	SV	EAD or EAS
Strikers	SV	EAD or EAS
Aviation Electronics Technician (AT)		
E-5 and above	AT	No change
E-4 and strikers	AT	ATN, ATS, ATR or ATW
E-4 and strikers	ATN	No change
E-4 and strikers	ATS	No change
E-4 and strikers	ATR	No change
Air Controlman (AC)		
All grades	AC	No change
All grades	ACR	AC
All grades	ACT	AC
E-4 and above	ACW	AC
Strikers	ACW	AC

Two AOs Return to Fleet

Two Fleet oilers – uss *Chipola* (AO-63) and uss *Chikaskia* (AO-54) have been recommissioned for service with the Atlantic and Pacific Fleets. They reported for duty in January.

Both ships took part in the invasion of Okinawa and Iwo Jima during World War II and were among the first to enter Tokyo Bay in 1945. They were placed out of commission in 1955, but *Chipola* had a brief return to active duty from January to November 1957 during the Suez crisis. *Chikaskia* served between Dec 1956 and Dec 1958 before being returned to mothballs.

Questions Junior Officers Ask CNO, and His Answers

WHEN ADM ARLEIGH A. BURKE, USN, Chief of Naval Operations, pays one of his frequent visits to a ship or station, he doesn't spend all his time at banquets or top-level conferences. He usually manages to drop around to the working quarters and chit-chat with whomever he finds there.

As at any other bull session, the theme "Why doesn't the Navy . . . ?" frequently comes up. Some questions and suggestions arise time after time. Many reflect the concern of junior officers regarding their careers in the Navy.

Convinced that these questions are of equal interest to young officers he hasn't yet met, the Admiral compiled a list of the most frequently asked question and passed them on to VADM W. R. Smedberg III, USN, Chief of Naval Personnel, for the official Navy position on each.

The questions, with their answers, give an excellent picture of the Navy as a career. Below, you will find a discussion of some of these points. More will follow in future issues of ALL HANDS.

I am not a college graduate. My performance indicates above average work. I do not want to waste two years of the Navy's time and money by attending a five-term program. If my performance continues as before, what is my career opportunity compared with a college graduate with lesser performance?

It is true that a major factor in determining advancement in the Navy is performance. An estimate of an individual's capacity to assume positions of responsibility—based on his training and experience in comparison with his contemporaries—must always be a factor in determining not only advancment but also assignment in order to obtain the most effective officer corps.

In this regard, college training is not a waste of your time nor the Navy's. The equipment and tactics of our present Navy have very dramatically shown a very urgent need for highly trained personnel. This has been the motivating factor behind our present emphasis on post-graduate and service college education. To be eligible for most post-graduate training you must have a college background or the major portion of work completed toward a college degree.

It would be difficult to determine the career advancement possibilities of a good performer with little or no college versus a performer of less quality and college training. The best qualification for career advancement is a combination of the best performance possible and the maximum amount of training and education obtainable—this should be the goal of every naval officer.

Are any steps being taken to avoid the hump now present in the LCDR and CDR bracket for ensigns in the future?

The hump in the LCDR and CDR area was caused by officers who were commissioned in large numbers between 1941 and 1945 to meet the requirements of World War II. At the present time ensigns are placed in year groups to meet requirements. They are closely controlled to insure that a hump is not developed and that the opportunity for a promotion to higher grades is held reasonably constant.

What is the career potential for junior USN and USNR 1100 and 1300 officers?

The promotion and professional advancement opportunities for such officers have never been brighter. The importance of the Navy in our nation's defense is steadily increasing, and these officers can expect to receive assignments which will rapidly increase in responsibility and importance. In addition, the bulk of the officers commissioned in World War II are moving into the upper grades or are being retired. More vacancies and more opportunities for the junior officers will result. This includes opportunity for augmentation of USNR officers.

All-Navy Cartoon Contest
LT B. E. Lodge, USN

"Mr. Smith! When did you last align your battery?"

Is there any plan contemplated which will increase the rate of promotion – possibly with outstanding merit as the basis–in order to enhance future prospects for career types?

Yes, the Bureau of Naval Personnel is now in the process of gathering samplings to ascertain the best method of promoting, at an accelerated rate, those officers who are top performers. The system, when prepared, will also be a means by which an officer can tell how he compares with the other officers in his promotion zone (that is, top, middle, or bottom one-third).

Why isn't more responsibility placed on each officer? A better officer corps would result.

Only part of our responsibilities are "placed" on us; many of our responsibilities are ASSUMED when we put on our ensign's stripe.

The opportunity for responsibility varies among our various types of naval units. In an AEW aircraft squadron, for example, an ensign or junior grade lieutenant has only a narrow area of responsibility; in a destroyer a junior grade lieutenant may find himself in charge of the entire engineering plant and all the engineroom and fireroom personnel —or as First Lieutenant, with all the ship's hull and equipment to maintain and the deck force to supervise.

Each junior officer's responsibility is all around him. Where the discharge of responsibilities placed upon him does not take the entire working day, he discharges his *assumed* responsibilities.

There is not a single skipper on a Navy bridge today who would not welcome the assumption of added responsibilities by his junior officers. There is no shortage of responsibility – there sometimes is a shortage of a sense of responsibility.

Is there any new legislation in the mill for the retention of Reserve officers on active duty?

Yes. The last Congress considered the problem in great detail. The House of Representatives passed a bill (HR 5132) which would have granted extensive benefits to Reserve officers on active duty. The Senate did not agree with the House bill and instead passed a bill which was considerably more conservative in its benefits. Congress adjourned before agreement could be reached. The Cordiner Committee recommended that legislation be enacted in the area and the Department of Defense is on record as favoring Reserve retention legislation. Congressional reaction has been favorable as indicated above. The only problem is in obtaining agreement on the exact provisions which should be included in the legislation. It is likely that this problem will be solved and that the next Congress will enact a Reserve retention law.

What is the future of Naval Air Reserve (TAR)? Is the plan to continue under present policy, or can we expect some major changes?

The plan is to continue under present policy with an allowance of approximately 860 TAR officers and 8000 enlisted personnel in the aviation programs. The only major change planned is a redesignation of officer billets under the Reserve Program Billet (RPB) concept. A study currently being undertaken will identify all officer billets that have a primary responsibility for the training, administration and recruiting of the Naval Reserve as Reserve Program Billets (RPB).

These officer billets will be further identified as follows: "T" billet (Reserve officer only), "E" billet (either a Regular or Reserve officer) and "R" billet (Regular only).

Preliminary studies and sponsor recommendations indicate 52 "T" billets, 798 "E" billets and 3 "R" billets for a total of 853 officer billets within the aviation program with primary responsibility for Naval Reserve matters.

Why is there always a big issue on federal housing? When a base is located in a new area, plans should then be made for adequate housing. It should be noted in these plans that the most numerous houses should have three bedrooms. Families with only two children of high school age, different sexes, should have a separate bedroom. I have four children!

ANSWERS TO QUIZ AWEIGH

1. (a) Three to four hours.
2. (b) Sunstroke.
3. (c) Four hours.
4. (b) Second degree.
5. (a) 18 inches.
6. (b) Give him stimulants.
7. (a) The bone has torn through the flesh.

Quiz Aweigh questions are on page 45.

It is recognized that adequate housing has been a problem. However, in recent years studies have been made and will continue to be made to assist in resolving housing shortages. For example, in 1955 the office of Analysis and Review (SecNav) made a statistical study based on family size and composition to assist in deciding the size of units to be constructed in the future.

In previous years, the mortgage limitations governing Wherry Housing somewhat limited the number of three and four bedroom units that could be constructed. The laws now governing Capehart Housing permit greater flexibility and the number of three and four bedroom units constructed are proportionately greater. A 1959 BuDocks Instruction states that normally 10 per cent of the units built for junior officers should be two bedrooms, 75 per cent three bedrooms and 15 per cent four bedrooms.

What is the possibility of establishing transient housing for the use of military personnel and their dependents when they receive permanent change of station orders? This housing could be utilized for a short time by personnel checking in or off a station. If this is not feasible what, if any, measures are being proposed to compensate for the rising cost of obtaining temporary quarters, i.e., hotel, motel, etc., incurred while carrying out PCS orders. Perhaps a per diem arrangement such as is now in effect for TAD orders might prove to be an answer or a raise of the dislocation allowance to reflect the higher cost of living.

Many naval installations already have so-called "transient housing" for incoming military personnel and their dependents (for example, New London, Mare Island). This policy is, however, dependent on the existence of an available supply of government operated housing and is subject to control by the local commanding officer. Generally, members departing a station stay in their permanent quarters until the day they leave; a notable exception is that of members in overseas stations who are entitled to Temporary Lodging Allowance during the 10-day period preceding their detachment, provided that they have vacated government quarters.

The Department of Defense has sponsored at least two legislative proposals to raise allowances. One would raise the travel per diem from the present maximum of $12 to $15. The other would provide for allowances on permanent change of station about as follows: For the member, $12 per day; for dependent wife, $6 per day; for each child over 12 years of age, $6 per day; for each child under 12 years of age, $3 per day; in addition, when travel is performed by privately owned vehicle, a mileage allowance of 15 cents per mile would be paid. The dislocation allowance (DLA), instituted in 1955, is itself, of course, a recent measure to compensate for costs incurred during PCS moves.

Each year a number of benefits are curtailed or limits of service are cut back. Why? Are we different from what we were five or 10 years ago? There was a need for them then—just as now! As I read about foreign areas, much is expended by the U.S. annually to improve the standard of living of people in foreign lands. All well and good—but why not do the same for our own armed services?

This is the sort of question which has its basis in rumor and misinformation. Fringe benefits are NOT cut back each year. To the contrary, benefits available to the armed services are possibly greater now than at any time in the past. For example:

Contingency Option Act of 1953. For the first time in history, it is possible for a deceased retired Navyman's surviving dependents to receive a portion of his retired pay. Formerly, when he died, his retired pay also expired.

Social Security Coverage. Legislation which became effective on 1 Jan 1957 put all active-duty military personnel under Social Security on a full participating basis, rather

than providing the limited gratuitous credit and reduced benefits which formerly existed. The new Act enables the individual to receive his retired Navy pay or any form of pension or compensation from the Veterans' Administration plus old age insurance payments upon reaching age 65.

Dependents' Medical Care. Effective on 7 Dec 1956, Navy dependents for the first time as a matter of right became entitled to certain medical, surgical, and hospital care at military or civilian facilities with all expenses borne by the government.

The trend in recent years has been in the direction of improvement of major benefits to the armed services. Our standard of living, the highest in the world, is enjoyed to the maximum practicable extent by our armed services.

I left my home state at 17 and have not returned except for visits and military duty. I don't consider it my legal home but I'm afraid that the state will feel that it is. I don't plan to live there. Now—why can't naval personnel have federal citizenship only? And why not federal tags for our car?

The law says that everyone must have a legal home (or domicile) and this is a reasonable requirement. A domicile once acquired is retained until another domicile is established. To establish a domicile a person must be physically present in the new locality and must have an intent for that place to be his home (not just a transient residence). State and local personal taxes and voting privileges are based essentially on domicile. There is no reason that a serviceman should not pay his reasonable share of taxes, and certainly he should have the privilege to vote. The Soldiers and Sailors Relief Act protects the serviceman from double taxation, but does not relieve him from the normal taxes of his place of domicile.

Federal citizenship would not accomplish any useful end for a serviceman unless it was accompanied with a provision of law excusing the serviceman from local taxes. Why shouldn't we pay our fair share for police protection, fire protection, schools and the many other services furnished us by local governments?

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 45—Announced approval by the President of reports of selection boards which recommended line officers on active duty for temporary promotion to the grade of lieutenant and women line officers to the grades of lieutenant commander and lieutenant.

No. 46—Cautioned all hands to exercise great care in driving during the holiday season.

No. 47—Announced details of ticket sales of Navy-Missouri football

WAY BACK WHEN

Salty Talk from the Old Timers

Most shipboard terms go back many years, and have a permanency about them. Some terms, however, have just about gone by the board, and are seldom, if ever, used today.

Here are some of these terms—terms that were once in the everyday speech of bluejackets of 75 or 100 years ago.

Shakings **were the odds and ends of yarns and small ropes found on deck after a period of working with rope. The shakings were swept up and put into a bag. Later the shakings were added to other shreds of rope fiber (oakum). Oakum was used for caulking the seams of a ship and for stuffing rope fenders.**

Girtling **was a block-and-tackle term. It pertained to a line rove through a single block rigged at the masthead. This single-whip device was chiefly used for hauling aloft spars and other rigging. A special form of girtling was the *hammock girtling*. It looked much like a clothes line and ran from the jackstaff to the foremast. After the crewmen scrubbed their hammocks they secured them to the hammock girtling to dry.**

Bull-earings **were lengths of well-worn manila rope that resembled a large and elongated eye splice. They were used to bend the upper edge of a square sail to the yard supporting the sail.**

Flemish horses **were small foot-ropes at the end of a yard. They were used by yardarm men when reefing sail.**

Gammoning **consisted of the iron straps, nuts and bolts and other rigging used to secure the bowsprit to the ship's stem.**

Putting a sailing ship through its paces called for some pretty complicated evolutions, as can be imagined. The heard-no-more names of these evolutions were interesting in themselves. *Chapelling the ship, box hauling, scandalizing the mizzen, clawing off,* and *clubbing* were a few.

Of these, clubbing was probably the least intricate. An example of clubbing would occur when the CO of a sailing ship, in a rapid and winding river, wished to take his ship downstream to the sea. It was a matter of partly drifting downstream and partly sailing downstream.

The bow anchor was heaved in until it was *under foot*, just touching the bottom but not digging in. In addition to being connected to the ship by the anchor cable (at the bow) the anchor was also connected by a large hawser to the ship's quarter. At the desired time the anchor cable was paid out and the anchor took hold on the bottom. A strain was then taken on the hawser running to the quarter. This imparted a force that would result in a desired change in the ship's heading. With the ship heading in the right direction, sails would be set to take her out to sea.

game at Orange Bowl, Miami, Fla., 2 January.

No. 48—Announced approval by the President of the report of a selection board which recommended line officers on active duty for temporary promotion to the grade of lieutenant.

No. 49—Discussed Navy Department non-appropriated fund activities.

No. 50—Extended best wishes to all hands from William B. Franke, Secretary of the Navy.

No. 51—Required that the issue and use of certain drugs be suspended.

No. 52—Announced approval by the President of the reports of selection boards that recommended officers on active duty for promotion to lieutenant commander, Medical Corps, Supply Corps, Chaplain Corps, Civil Engineer Corps, Dental Corps, Medical Service Corps and Nurse Corps; and to lieutenant, Supply Corps, Chaplain Corps, Civil Engineer Corps, Medical Service Corps and Nurse Corps.

No. 53—Discussed supplies and services to be procured from foreign sources and used outside the United States.

No. 54—Provided further information concerning the return of Navy dependents from overseas.

No. 55—Warned that special precautions should be taken to avoid overpayments of per diem for authorized holiday leave.

Instructions

No. 1110.4A—Sets forth the requirements for participation in the nationwide competitive examination for appointment to cadetship in the U. S. Coast Guard.

No. 1210.7A—Outlines the general policies and procedures to be followed in providing special training and indoctrination for USN line officers, code 1310, who have been removed from flight status and assigned to the 1100 code.

No. 1310.28A—Contains information concerning the assignment of officers to nuclear submarines.

No. 1500.25G—Announces dates for fiscal year 1962 for classes at training activities under the management control of the Chief of Naval Personnel.

No. 1520.68A—Restates information on the Navy Nuclear Power Training program (surface ship) and informs officers how to apply for training.

NOW HERE'S THIS

Meet AEVTKS-19

Chances are it would confuse the rest of the Navy thoroughly, but the crew of the ammunition ship *USS Diamond Head* (AE 19) might be pardoned for contemplating a change in hull number to AEVTKS 19.

They're versatile, that's why.

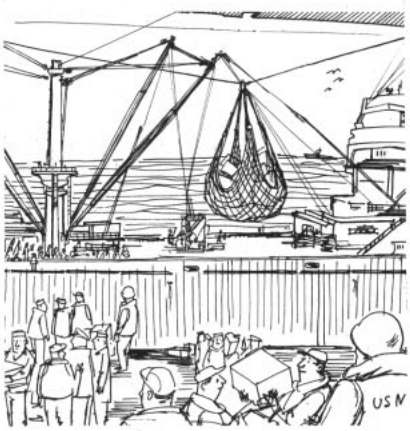
Versatility's a highly prized virtue nearly everywhere. There isn't a major league baseball manager, for example, who wouldn't cheerfully give his right arm for a utility infielder capable of handling two or three positions with equal facility.

It's true in the Navy too—and *Diamond Head* is the current apple of Commander Sixth Fleet's eye. Twice within the space of a few days recently she departed her normal role to step in and provide emergency service to the Fleet.

First of all, she temporarily suspended her routine ammunition supply work to race to Cannes, France, and Leghorn, Italy, to take aboard three jets and an A4D from the attack aircraft carriers *Saratoga* (CVA 60) and *Intrepid* (CVA 11) respectively.

Then, back in Naples, her short-lived status as a utility carrier (AVT) completed, she shifted smoothly to another field—that of the general stores issue ship (AKS). *Saratoga*, it seems, was in dire need of emergency restocking, so *Diamond Head* loaded aboard some 110 tons of everything from jet engines and afterburners to ship's store goods and took off again for Cannes.

Actually, *Diamond Head's* crew is pretty blase about the whole deal. They're inclined to shrug it off as "all in a day's work"—and besides, they don't really think the Navy would let them carry a hull number like that anyway.



No. 1560.6B—Deals with the administration of USAFI tests and testing sections.

Notices

No. 1510 (21 November) — Announced an advance change to the *Enlisted Transfer Manual* (NavPers 15909) which was made necessary by the requirements outlined in Alnav 31.

No. 1221 (22 November) — Provided instructions for specific coding actions required upon receipt of Change 3 to the *Manual of Navy Enlisted Classifications* (NavPers 15105B).

No. 1020 (25 November) — Announced the establishment and authorization for wearing the Command at Sea insigne.

No. 1750 (25 November) — Disseminated information concerning the preparation of revised tables of percentage reduction of retired pay and conversion tables under the Uniformed Services Contingency Option Act.

No. 4631 (25 November) — Advised naval commands and activities of the possible delays that may be encountered by personnel who planned travel via MATS on a space-available basis during the Christmas and New Year's leave period.

No. 1520 (2 December)—Requested applications from commissioned USN and Marine Corps officers and midshipmen for Navy sponsorship in the 1961 Rhodes Scholarship competition.

No. 1020 (13 December)—Implemented recently approved changes to *U. S. Navy Uniform Regulations.*

No. 1440 (13 December) — Announced certain changes in the rating structure and provided a new bibliography of training courses and study materials for affected ratings.

No. 1210 (16 December)—Invited applications from certain permanently commissioned USN line officers for transfer to the Regular Navy Civil Engineer Corps.

No. 1430 (20 December)—Called attention to the most common errors in submission of information to the Naval Examining Center in advancement in rating documents.

No. 1430 (21 December) — Described advancement opportunities for enlisted personnel.

Command-at-Sea Insignia Are Now Available, Requirements Are Listed

You can now recognize a commanding officer of a commissioned ship or aircraft squadron in the Fleet by a new Command at Sea Insigne which he wears on his right breast. If he is a former CO, the device will be worn on the left breast.

The new insigne is a metallic gold star superimposed on anchor flukes and an unfurled commissioning pennant. The insigne is available in Navy Exchanges, ship's stores afloat and Navy uniform shops.

Officers in the grade of captain or below are eligible to wear the new device.

The following criteria apply for officers currently in command of commissioned ships or aviation squadrons:

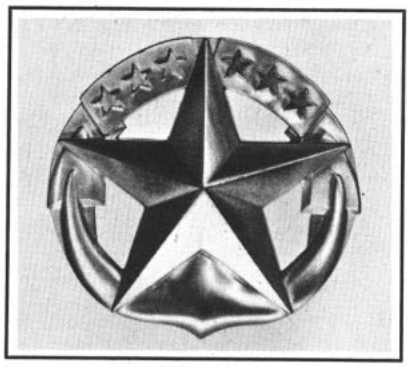
- Commissioned ships must be in active status.
- Aviation squadrons must be those that operate with or in direct support of the Fleet.
- Commanding officers of aviation squadrons who remain at an administrative headquarters ashore while units or detachments are deployed or operating at sea are NOT eligible.
- An officer who is only temporarily in command (for example, during absence or illness of the CO), is also NOT eligible to wear the device.

Unit commanders (captain and junior thereto), including air group commanders, of the above ships and squadrons that meet the criteria are eligible to wear the Command at Sea Insigne.

Officers who have successfully completed a normal tour of duty in command of commissioned ships or aviation squadrons must meet the following criteria:

Commanding officers should have commanded a commissioned ship or aviation squadron in active status, as described for officers currently in command, for a period of not less than six months, and at least one half of that period must have been in an operating status. Those officers removed from command for cause are NOT eligible to wear the insigne.

BuPers Notice 1020 of 25 Nov 1960 authorized officers who are currently in command as a result of orders from the Chief of Naval Personnel to wear the Command at Sea Insigne.



Other officers who consider themselves eligible must submit a request to their commanding officers or immediate superiors, as appropriate, for authorization.

TV Series Now Available from Navy Motion Picture Service; New Movies Are Listed

Four TV series have recently been made available to ships through the Navy Motion Picture Service. These, like the motion pictures listed below, may be obtained at Bldg. 311, Naval Base, Brooklyn 1, N. Y.

Two of these one-hour TV shows will be packaged together for a 108-minute program. Commercials have been deleted. However, these TV programs may be shown aboard ship only. They are not to be exhibited at shore stations. Below, you will find a listing of movies and TV programs made available in December.

Movies in color are designated by (C) and those in wide-screen processes by (WS). They are available for ships and bases overseas.

Motion Pictures

Last Days of Pompeii (1631) (C) (WS): Melodrama; Steve Reeves, Christine Kauffman.

Sons and Lovers (1632) (WS): Drama; Trevor Howard, Dean Stockwell.

Cage of Evil (1633): Melodrama; Ron Foster, Pat Blair.

Sign of Zorro (1634): Western; Guy Williams, Henry Calvin.

Nights of Lucretia Borgia (1635) (C) (WS): Melodrama; Belinda Lee, Jacques Sernas.

Breakout (1636): Melodrama; Richard Todd, Bernard Lee.

The Brides of Dracula (1637) (C): Melodrama; Peter Cushing, Freda Jackson.

Studs Lonigan (1638): Drama; Christopher Knight, Katherine Squire.

The Lost World (1639) (C) (WS): Melodrama; Michael Rennie, Jill St. John.

The High Powered Rifle (1640): Melodrama; Willard Parker, Allison Hayes.

Seven Ways From Sundown (1641) (C): Western; Audie Murphy, Barry Sullivan.

Pollyanna (1642) (C): Melodrama; Jane Wyman, Richard Egan.

The 39 Steps (1643) (C): Melodrama; Kenneth More, Taina Elg.

Magic Boy (1644) (C) (WS): Animated cartoon.

The House of Usher (1645) (C) (WS): Melodrama; Vincent Price, Myrna Fahey.

All the Young Men (1646): Drama; Alan Ladd, Sidney Poitier.

Television Programs

5004 TV-1 (Series) *Wagon Train*—Western; (Episode) The Mary Halstead Story.
TV-2 (Series) *Riverboat*—Post-Civil War Drama; (Episode) Race to Cincinnati.

5005 TV-1 (Series) *Wagon Train*—Western; (Episode) The Clara Beachamp Story.
TV-2 (Series) *Riverboat*—Post-Civil War Drama; (Episode) Unwilling.

5006 TV-1 (Series) *Bonanza*—Western; (Episode) The Hanging Posse.
TV-2 (Series) *The Untouchables* — Underworld Drama; (Episode) The Noise of Death.

5007 TV-1 (Series) *Bonanza*—Western; (Episode) The Sisters.
TV-2 (Series) *The Untouchables* — Underworld Drama; (Episode) Ma Barker and Her Sons.

5008 TV-1 (Series) *Wagon Train*—Western; (Episode) The Nels Stack Story.
TV-2 (Series) *Riverboat*—Post-Civil War Drama; (Episode) Long Trail.

5009 TV-1 (Series) *Wagon Train*—Western; (Episode) The Emily Rossiter Story.
TV-2 (Series) *Riverboat*—Post-Civil War Drama; (Episode) Strange Request.

5010 TV-1 (Series) *Bonanza*—Western; (Episode) The Last Trophy.
TV-2 (Series) *The Untouchables* — Underworld Drama; (Episode) You Can't Pick the Numbers.

5011 TV-1 (Series) *Bonanza*—Western; (Episode) Mr. Henry Comstock.
TV-2 (Series) *The Untouchables* — Underworld Drama; (Episode) The Jake Lingle Killing.

5012 TV-1 (Series) *Wagon Train*—Western; (Episode) The Les Rand Story.
TV-2 (Series) *Riverboat*—Post-Civil War Drama; (Episode) Path of the Eagle.

5013 TV-1 (Series) *Wagon Train*—Western; (Episode) The Honorable Don Charlie Story.
TV-2 (Series) *Riverboat*—Post-Civil War Drama; (Episode) Witness No Evil.

5014 TV-1 (Series) *Bonanza*—Western; (Episode) Vendetta.
TV-2 (Series) *The Untouchables* — Underworld Drama; (Episode) Ain't We Got Fun.

5015 TV-1 (Series) *Bonanza*—Western; (Episode) Deide Schiemer.
TV-2 (Series) *The Untouchables* — Underworld Drama; (Episode) Vincent Mad Dog Coll.

5016 TV-1 (Series) *Wagon Train*—Western; (Episode) The Willie Moran Story.
TV-2 (Series) *Riverboat*—Post-Civil War Drama; (Episode) Landlubbers.

5017 TV-1 (Series) *Wagon Train*—Western; (Episode) The Jean Lebec Story.
TV-2 (Series) *Riverboat*—Post-Civil War Drama; (Episode) Tampico Raid.

5018 TV-1 (Series) *Bonanza*—Western; (Episode) Feet of Clay.
TV-2 (Series) *The Untouchables* — Underworld Drama; (Episode) Mexican Stake Out.

5019 TV-1 (Series) *Bonanza*—Western; (Episode) The Outcasts.
TV-2 (Series) *The Untouchables* — Underworld Drama; (Episode) Artichoke King.

HOW DID IT START

The Navy Uniform

Every enlisted man knows his uniform is traditional. Yet ask him the origin of some items of dress, and you may be surprised at his answer.

Some may know, others may think they know, while still others may not even attempt to guess.

Many parts of the uniform originated in the Royal Navy. The stripes on the collar of the dress blue jumper are just one example. Many sailors believe these three stripes commemorate the three victories of the British Admiral Lord Nelson. History, however, tells us that the three stripes were authorized by the British Admiralty in 1857 simply for decorative effect. It seems that before that time enlisted men had decorated their collars with all sorts of white designs. The U.S. Navy picked up the three-stripe idea from the British.

The neckerchief also comes to us from the Royal Navy. And here, many Navymen mistakenly believe that the black neckerchief was first worn at the funeral of Lord Nelson. Although sailors undoubtedly wore black at his funeral, neckerchiefs actually date back to earlier times.

Back in the old, old Navy, many sailors wore their hair in pigtails which hung down their backs. The pigtail was made stiff and held in place with grease or tar.

To protect the uniform, the men first wore a piece of cloth around the neck which was eventually sewn to the uniform and became a part of it. They used bandanas or large handerchiefs to keep the grease from their clothing. Other sailors used a large black handkerchief—probably carried around their necks—to remove perspiration.

Through the years the black cloths became today's neckerchief.

The color of our uniform is also a legacy of the British Navy. In the middle of the 18th century the British Admiralty was asked to standardize the Navyman's uniform. In a move to do this, Admiralty officials asked some officers to appear before them in a uniform which they considered appropriate. Several colors and designs were presented, but a blue uniform with white trim was selected.

Thirteen-button trousers seem to belong only to the U.S. Navy, yet here again there has been some doubt as to the reason for the number of buttons. Many men believe that the 13 buttons symbolize the 13 original U.S. colonies. This, as far as we can tell, is not true. In 1894 the trousers had seven buttons, and later, when the trousers were redesigned, 13 buttons were used, apparently with no particular significance as to number.

Newest and Most Modern — Naval Hospital, Great Lakes

If you happen to get sick while in the Great Lakes (Illinois) area, you'll have the newest and most modern of naval hospitals at your disposal.

After eight years of planning and construction, the U.S. Naval Hospital, Great Lakes, has come into being. The 800-bed facility replaces many World War II wooden barracks-type wards. A T-shaped, 15-story building, it is built to support an additional 700 beds, should an emergency arise.

In addition to 26 wards, the new hospital contains its own post office, bank, chapel and Navy Exchange outlet. Hospital facilties include 13 operating rooms, plus modern physical therapy and rehabilitation departments.

Features of special interest include: A closed-circuit TV system; piped oxygen system; sonic energy instrument-cleaning unit; emergency electrical system; overhead anaesthesia panels in each operating room, and a radiant-heat snow-melting system under the service drive and loading area.

The hospital was built of structural steel with brick and glass walls. Certain key areas of the hospital have conductive flooring so that no static electricity can be gathered by patients, hospital staff, or equipment.

Great Lakes is headquarters of the 9th Naval District, the nation's largest, which includes thirteen states.

Roundup on Assignment and Rotation of Ensigns and LTJGs

IF YOU FIND YOURSELF confused by the procedures employed to determine the assignment and rotation of junior officers (ensigns and lieutenants, junior grade), you'll find many of the answers in BuPers Inst. 1301.33A. It's a down-to-earth presentation specifically designed to give a better understanding of these principles. (Assignment of aviation personnel is covered by BuPers Inst. 1301.35, discussed on pp. 48-49 of the August 1960 issue of ALL HANDS.)

Assignment of junior line officers is strongly influenced by the need for men qualified at sea. Thus, assignment to sea duty of all newly-commissioned Code 11XX officers is a practice followed to the greatest possible extent consistent with the needs of the service. However, deviation from this pattern is sometimes caused by three factors:

- The large number of officers assigned to the shore establishment.
- The large number of officers on active duty whose period of obligated service is for two or three years.
- The limited number of Regular officers, particularly lieutenants. Many of the billets written for higher grades must be filled with LTJGs and ensigns.

Assignment for LTJG and ENS (1100)

If you are commissioned originally as an 1100 officer (but not ordered initially to submarine or flight training or shore or staff duty) you will first be ordered to duty in ships for three to five years—a step taken to provide experience and necessary qualifications leading to command. In general, you will be scheduled to remain in your first ship for about two years.

Early assignment to a lieutenant's billet (department head in a small combat ship) would be advantageous, not only to your best professional interest, but also to the Navy. Therefore, if at any time during your first two-year duty assignment, you are able to qualify for a lieutenant's billet, you will be reassigned. The reassignment will be for about 24 months and will take into consideration the earned qualification, your own wishes and the needs of the service.

All-Navy Cartoon Contest
D. F. Joachim, JO3, USN

"Damn the mosquitos—full speed ahead!"

An officer approaching qualification should advise the Chief of Naval Personnel, by means of the Officer Preference and Personal Information Card (NavPers 2774), of his desires concerning his next assignment. Official requests for retention in the same ship or for transfer to another ship will be carefully considered by the Chief of Naval Personnel.

If qualified, you may request orders to submarine or flight training during the early part of your career. Other selected lieutenants (junior grade) may be ordered to commanding officer or executive officer billets in small ships or to billets in afloat staffs, including aide billets. In this respect, your wishes, as indicated on your 2774 card, will be given as much consideration as possible.

Those who might be reassigned to a shore billet in the normal course of events at the end of the first phase (three to five years) of their careers, but who prefer to remain at sea to attain more professional experience and qualifications at sea (particularly in commanding officer, executive officer or staff billets), may request such assignments. This may be done by an official letter request to the Chief of Naval Personnel (Pers B114).

If you have been commissioned originally from the NROTC program, and have not indicated your intention to apply for retention as an officer of the Regular Navy, you will normally complete the third year of your obligated service in the same ship, if you have a lieutenant's billet or expect it within a reasonably short time. Those who are qualified and cannot fleet up on their ship may be reassigned to another ship or staff of the same type, where they can fill such a billet. On the other hand, those who are not scheduled to fill a lieutenant's billet and who do not officially request other assignment, may be used in the same type ship program, or be assigned to billets in afloat staffs, or to shore billets.

Initial assignments for submariners – Upon graduation from Submarine School, you may generally expect at least a three-year tour in operating submarines. Submarine program assignments are based on the needs of the service and your professional development. It is during the first sea period that you become eligible for advanced training in nuclear power.

Sea/Shore Rotation for LTJG and ENS (1100)

The initial assignment at sea normally runs from three to five years. After this time, most Code 1100 officers are ordered to billets ashore. Duty may include postgraduate instruction, instructor duty at one of the NROTC universities or at the Naval Academy; billets at training activities; duties in offices of the Navy Department, including the office of CNO and the various bureaus, and various other billets.

Normally the length of the first shore tour is two years, but it may be extended to three years where certain postgraduate courses are involved. Submariners will usually be eligible for shore duty at the end of about six years' commissioned service.

Assignment for LTJG and ENS (6xxx, surface line)

LDOs are assigned to ships and activities for employment in their specialty in order that their technical ability and experience may be fully utilized. Strong efforts are made at their ship or activity to assign them to primary duties consistent with their specialty—and to insure that additional duties do not unduly interfere in this regard.

LDOs of surface line categories are assigned to unrestricted line billets. There are no billets written for

LDOs. An individual officer's LDO classification is normally the prime consideration in assignment to duty.

The normal rotation plan calls for 24 to 30 months at sea and two years ashore. In those cases where the LDO fleets up to department head or an equally responsible staff billet, he may be toured up to 36 months in order to serve at least one year in the billet.

Assignments for LTJGs and ENSs (1105)

Initial assignments to the Fleet or the shore establishment are governed by service requirements, special requirements, special qualifications, individual preference, and expressed career motivation. The pattern is:

• *Three-year service obligation*—If assigned to sea duty you are tentatively scheduled to remain in your first assignment for about 24 months. If you fleet up to a lieutenant's billet either in a ship or staff you will generally complete a three-year tour. On the other hand, if you are considered qualified to fleet up to a lieutenant's billet but are blocked, you may expect to be reassigned to other ships in the same type or to shore staff billets requiring sea experience and qualification.

The determination of these assignments will be on the basis of service needs and on your wishes as expressed via your 2774 card. An expression of desire for rotation to another type ship or duty ashore should be accompanied by a request for extension, if applicable, to insure a two-year tour in the ship or to meet the tour-length requirement described in the Officer Fact Book (NavPers 15898).

• *Two-year service obligation*—Assignment is made either to sea or shore. The normal tour is two years in one billet. Those initially assigned ashore who request sea duty after 12 months in first assignment—and who will assume sufficient obligated service to complete a two-year tour—will, if service needs permit, be ordered to sea.

Extension and Augmentation for LTJG and ENS (1105)

If you wish a career or rotation of duties which would provide a background comparable to that of your USN contemporaries you may, at any time, request an extension of active duty. Requests will receive favorable consideration, consistent with the needs of the service and in accordance with individual records of qualification and performance. For assignment purposes, those officers extending for career rotations or applying for augmentation are considered as code 1100 officers and are assigned accordingly.

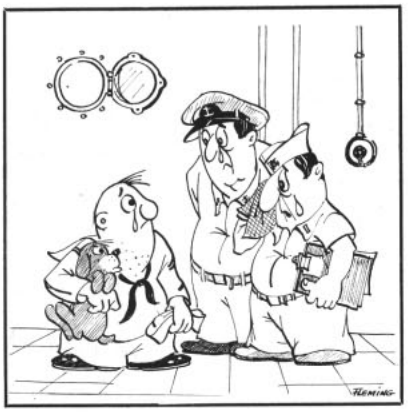
Naval Officer's Guide Ready in New Edition

The fifth edition of *The Naval Officer's Guide* is off the presses, and is now available for purchase.

This latest edition of the popular work by RADM Arthur A. Ageton, USN (Ret.), has been completely rewritten and updated by the author in collaboration with CAPT William P. Mack, USN. A *Polaris*-age edition designed to "assist the young officer in meeting the challenging demands placed upon him by the Navy in the world today," it provides between one set of covers all the information for which an officer would otherwise have to hunt through many volumes and manuals.

It is a 649-page volume with illustrations and appendices. Among topics covered are: "Our Navy and the Challenge to Our Free World"; "First Station"; "Military Duties of the Naval Officer"; "Naval Courtesies, Honors, and Ceremonies"; and assorted other subjects right through to "Retirement."

All-Navy Cartoon Contest
ENS J. E. Fleming, USN



"That's the saddest story I've ever heard, Hogan, but you still can't bring your dog aboard."

Related Assignment/Rotation Matters for LTJG and ENS

• *Instruction between duty stations*—As a part of career planning for each officer—and if called for by various factors, including the needs of their next ship or activity—LTJGs and ENSs are ordered to various courses of instruction in Fleet and other schools while en route. Inasmuch as most courses convene on specific dates, your availability date and the convening date of the school must be compatible.

An example of between-duty-station schooling for career planning may be found in the case of a Lieutenant JG who has completed two years of engineering duty in a small combatant ship and is under orders to a large combatant ship or amphibious type. Such an officer may be considered for CIC school or an appropriate Fleet training school for a course other than engineering. He would be ordered there before reporting to his new station.

Another example may be found in an ENS being ordered to a ship as a prospective damage control officer. Such an officer may be routed through a damage control school en route to his ship.

If you wish to be considered for a certain course of instruction between duty stations, it is appropriate to make note of this desire in the "Remarks" section of your 2774 card.

• *Extension of Active Duty*—One requisite for reassignment is sufficient obligated service to make the transfer economically feasible. For assignment to shipboard duty, particularly in a different type ship, you normally should have sufficient obligated service to complete approximately 24 months in the billet.

For assignment to overseas duty, you should have sufficient obligated service to complete the prescribed tour of duty for the area.

Details about the submission of requests to remain on active duty beyond the normal period of obligated service are listed in BuPers Inst. 1926.1C, Change 1.

In the case of an officer with insufficient obligated service who requests a change of duty, it is appropriate for him to include an

agreement to extend for the required period of active duty if reassigned as requested.

• *Rotation Procedures*—Procedures at the Bureau of Naval Personnel provide for the automatic review of the records of each lieutenant (junior grade) and ensign about four months before the date scheduled for normal reassignment. At that time, duty and school preferences are noted and the officer situation in the particular ship or station is reviewed. In so doing, attention is given to such items as record of performance, prospective losses and assignments and operating schedules. After due consideration of those items, the next assignment and en route schooling are determined.

• *Issuance of Orders* – The Chief of Naval Personnel tries to provide officers scheduled for new duty assignments with the maximum amount of advance notice. To this end, every effort is made to give advance notice as follows:

Minimum—one month
Standard—two months
Optimum—three months

Exceptions are kept to a minimum.

All-Navy Cartoon
W. R. Maul, CT1, USN

"Oh, for heavens' sakes, fellows! Am I the 'Old Maid' again?"

• *Officer Preference and Personal Information Card* (NavPers 2774)—The 2774 cards are an important part of the detailing records maintained at the Bureau of Naval Personnel. No assignment is made without reference to them. This information is viewed by the assignment officers as reflecting the submitting officer's current preferences and current personal problems—preferences and problems that deserve consideration in the assignment.

Officers are encouraged to forward a revised 2774 card whenever there has been any change in conditions that might possibly affect their assignment—such as change of preference, dependency, additional education, or schools completed. Of extreme importance to each officer are the prompt submission and a conscientious completion of all applicable sections of the card.

ALL HANDS Wants to Tell Your Story

ALL HANDS magazine wants to know about your ship, your command, and about you if you have an interesting story to tell.

All Navymen—not only journalists, photographers and public information officers—are encouraged to submit to ALL HANDS material which they consider interesting to other Navymen. All submitted material is carefully considered for publication.

Here are a few suggestions and pointers that may help you get started in the right direction:

Articles about new types of unclassified equipment, unclassified research projects, all types of Navy assignments and duties, academic and historical subjects, personnel on liberty or during leisure hours in hobby shops, daily shipboard activities, sports and recreation, training, and humorous and interesting feature subjects are all of interest to our readers.

We do not use poems, songs, stories on change of command, or the editorial type of article. Also be careful not to submit material uncomplimentary to individuals or libelous in nature.

Photographs which illustrate the above subjects are very important to the articles—and desirable, if you have them. (However, don't hold back a good story because you don't have any photographs.)

Clear, well-identified, 8-by-10 (if possible) glossy prints add immeasurably to the value of your written material. All persons in the photographs should be identified by full name and rate or rank. Location and general descriptive information must also be included in the cutline along with the name of the photographer.

Don't send pictures of teams or large groups who are "mugging" the camera—we prefer action pictures. Also make sure all personnel are in the proper uniform and not in slovenly poses. Hats should be squared, pockets empty (no cigarettes or pencils), sleeves rolled down, and men not obviously in need of a haircut. ALL HANDS is unable to use hundreds of submitted pictures each year because of these reasons.

Photographs of such routine ceremonies as a new CPO eating his first meal in the CPO mess or a blood donor lying on a cot are of little value to us. Here again, we receive hundreds of photos like these, and they all show almost the same thing.

Written material should be typed, double-spaced on one side of the paper, with the writer's name and rate or rank shown someplace on the copy. If the material is being sent exclusively to ALL HANDS, say so.

Photographs should be mailed flat with stiff cardboard reinforcement. Do not write on the back of the photos with a sharp pencil or pen, and do not staple or pin material to the photos.

If your article is timed for a certain date or event, it must be in the hands of the editor before the first of the month prior to intended publication. Thus, 1 June is the absolute deadline for the July issue, and the material should be in one or two weeks before, if at all possible. Extensive research, rewriting or security clearance may hold up material for some time after it reaches ALL HANDS, so submit your material early.

Address material to ALL HANDS (a forwarding letter is not necessary) as follows:

Editor, All Hands
1809 Arlington Annex
Navy Department
Washington 25, D.C.

From time to time ALL HANDS is accused of hitting one ship, or activity, or area too hard, and forgetting about others. The only reason we run articles about other ships and stations and about other Navymen is probably because they submitted an interesting article and you did not.

DECORATIONS & CITATIONS

"For exceptionally meritorious service to the Government of the United States in a duty of great responsibility . . ."

★ REES, William L., VADM, USN, for exceptionally meritorious service to the United States as Commander Naval Air Force, U.S. Atlantic Fleet from May 1956 to September 1960. Vice Admiral Rees achieved a significant improvement in the combat readiness of his forces which, in turn, was reflected in improved combat capability of Atlantic Fleet, Sixth Fleet and North Atlantic Treaty Organization forces. His foresight and wise planning contributed materially toward expediting the early operational readiness of the *Forrestal* Class aircraft carriers, thus enhancing Fleet readiness. The improved air warfare capabilities of naval aircraft assigned to the Atlantic Fleet forces is indicative of the astute training policies used by Vice Admiral Rees.

"For exceptionally meritorious conduct in the performance of outstanding service in the Government of the United States . . ."

Gold Star in lieu of Second Award

★ WATKINS, Frank T., RADM, USN, for exceptionally meritorious conduct in the performance of outstanding service as Commander Antisubmarine Force, U.S. Atlantic Fleet, from March to July 1957, at which time this force was susperseded by the Antisubmarine Defense Force Command, U.S. Atlantic Fleet, which he commanded until 8 Aug 1958; as Commander Ocean Sub-Area, U.S. Atlantic Fleet, and Commander U.S. Atlantic Sub-Area and Ocean Sub-Area Atlantic in the North Atlantic Treaty Organization from March 1957 to 8 Aug 1958; and as Commandant, Thirteenth Naval District, from 27 Aug 1958 to 31 Dec 1960. Exercising a high degree of professional ability, Rear Admiral (then Vice Admiral) Watkins organized and became the first Commander Antisubmarine Defense Force, U.S. Atlantic Fleet, a dynamic operational command for the defense of the East Coast and a key command in the defense posture of the continental United States.

★ MCDONALD, Edwin A., CAPT, USN, for exceptionally meritorious conduct in the performance of outstanding service as Commander Task Unit 43.1.3 with the United States Naval Support Force, Antarctica, during Operation Deep Freeze 60. Exercising a high degree of professional skill and leadership, Captain McDonald planned and directed the first penetration of the Bellingshausen Sea, Antarctica, by surface vessels. He then organized his units in order to gain the maximum scientific value from this penetration, carrying out geological, oceanographic and biological surveys of great importance in this previously unexplored region. Deploying the ships of his task unit along the coast of the Thurston Peninsula, he succeeded in delineating the coastline and discovering many new geographical features, although the coastal waters were completely unsounded. In addition, he directed operations which resulted in the rescue of the Danish vessel, *Kista Dan*, which was carrying the British Antarctic expedition.

★ STEELE, George P., II, CDR, USN, for exceptionally meritorious conduct in the performance of outstanding services from 1 Aug to 14 Sep 1960 as commanding officer of USS *Seadragon*, SS(N) 584. Under Commander Steele's excellent leadership, *Seadragon* successfully negotiated the hazardous Northwest Passage from the Atlantic Ocean to the Pacific Ocean via the Arctic Basin. During this cruise, the first accurate measurements of the underwater area of icebergs were accomplished and all other operational and scientific objectives achieved, resulting in the accumulation of information and technical data of great value to the United States.

"For heroic conduct not involving actual conflict with an enemy . . ."

★ AMMAN, Bernard, CDR, USN, for heroic conduct in rescuing three servicemen from a burning automobile which had crashed into a tree at Newport, R.I., on 29 Jul 1960. With three of the four occupants unable to get out of the flaming wreckage, Commander Amman immediately proceeded to remove the victims from the car to a nearby ditch for protection against a possible gasoline explosion. He then moved the fourth occupant, who had been thrown clear of the vehicle, to a position of safety.

★ GOODING, Callis C., AD2, USN, for heroic conduct as crewman of a helicopter which crashed on 22 Apr 1956 while engaged in searching for a downed aircraft in the vicinity of Pine Mountain, Ventura County, Calif. Thrown clear of the helicopter by the initial impact (when the craft went out of control, crashed to the ground from an altitude of approximately 30 feet, and began burning near the tail section), Gooding, although injured, immediately proceeded to the crashed helicopter and succeeded in removing the two remaining occupants, one of whom was unconscious, moments before the helicopter exploded in a shower of flaming wreckage. Gooding promptly and courageously risked his own life to save the lives of others.

★ LEAVITT, Donovan R., HM2, USN, for heroic conduct while serving as range corpsman during a flame-thrower firing exercise at Camp Kinser, Okinawa, on 24 Feb 1960. When a flame thrower developed a malfunction while being fired, causing a billowing of flames a few feet in front of the student operator, Leavitt, who was standing nearby, immediately moved to the side of the gunner, grasped the flaming gun group, and attempted to control the weapon. Although sustaining severe burns, he remained with the gun and controlled the direction of fire until the fuel was expended, thereby preventing serious injury or possible death to other men in the area.

★ TRADER, Thomas A, SA, USN, for heroic conduct as the stern sentry on board USS *Navasota* (AO 106) in Singapore Harbor, Singapore, British Commonwealth of Nations, on 24 Apr 1960. When a shipmate accidentally fell overboard from *Navasota*, and was in immediate danger of drowning, Trader, hearing cries for help, leaped into the water in an attempt to effect a rescue. Despite adverse conditions of darkness and a running current, he succeeded in reaching the victim, overcame his frenzied struggles, and swam with him to the safety of the ship where both men were helped aboard. Risking his own life to save that of another, Trader upheld the highest traditions of the United States naval service.

BOOKS

POLARIS TO CIVIL WAR IN MONTH'S SELECTION

TWO BOOKS SELECTED for review this month are of special interest to Navymen with their eyes on the future. One is concerned with the wide-open spaces under the sea; the other, the sky. These and many others may be found at your ship or station library.

Polaris, by James Baar and William Howard and *Project Mercury* by Martin Caidin are the forward-looking numbers. The others—with one outstanding exception—emphasize the historical pitch.

Polaris is, of course, of most immediate interest to men in the Navy, as well as to every U.S. citizen. The book tells the story of this weapon system—its conception and its development—as a human as well as scientific adventure. It passes out credit to the men who made possible the development of the *Polaris* missile which is considered to be this country's best item in the arsenal of deterrent hardware. In presenting a biography of RADM William F. Raborn, Jr., the authors succeed admirably in conveying the sense of drive and urgency behind the whole program. One phrase we liked—which they picked up from VADM Charles Wellborn, Jr., Commandant of the Third Naval District, speaking at the commissioning ceremonies of *Patrick Henry*—was the paraphrase of Oliver Cromwell: "Put your trust in God, but be sure to keep your deterrent mobile."

In ***Project Mercury,*** (subtitled the story of America's man-in-space program and the seven astronauts), Caidin gives a full rundown on one of the most fascinating ventures man has ever attempted—the effort to throw a man into space with a reasonable chance that he will come back. In its implications it surpasses Columbus' attempts to find a new world (and who, today, would not be delighted to have a birds-eye view of that voyage?). The author of *Vanguard* tells how Project Mercury will work; its purposes; how the astronauts were selected and how they are being trained for a flight literally out of this world; and the problems and dangers they must overcome. Here is a nonfiction job which easily out-fictions any science fiction story you ever read.

The Man Who Rode the Thunder by William H. Rankin, LTCOL, USMC is, if you will, a slice of contemporary history. It is literally an I-was-there story which is not likely to be repeated. In July of last year, without special pressure equipment, LTCOL Rankin was forced to abandon his *Crusader* jet at almost 50,000 feet. He fell from some nine miles up to make what is probably the longest emergency parachute jump in history.

After a free fall of seven miles, LTCOL Rankin hit a thunderstorm. While thunder roared and lightning flashed around him, he underwent a 35-minute ordeal which only he can describe. As he explains it, he came out alive only as a result of his previous training and experience.

Working backward in time, we next come to ***White Ensign,*** by Captain S. W. Roskill, RN (Ret.), who tells us of the British Navy at war from 1939 to 1945. This is one of an informal series of accounts, published by the U.S. Naval Institute, describing World War II from the viewpoint of the respective antagonists. In the words of the author: "I felt that an unbiased account of the policies, purposes, successes and failures of the British sea services might help to preserve the balance of the Naval Institute's series. Though I readily admit that I feel proud of the tale of endurance in the face of disaster, of patience in adversity, and of persistence in the pursuit of victory, I have tried to present it with honesty and fairness towards our late enemies."

The Civil War is represented by two new volumes: ***CSS Shenandoah*** and ***The Civil War at Sea.***

Shenandoah was the famous Confederate cruiser that fought the Civil War for more than six months after the war was over. (See the September 1959 issue of ALL HANDS for another viewpoint.) Her single voyage, during which she captured 38 Union ships, burned 34 more and destroyed the New Bedford whaling fleet, is one of the classics of the war. James D. Horan, Civil War historian, recently found in the National Archives the story of the raider as told by her captain, Lieutenant Commanding James I. Waddell. It is here published complete for the first time.

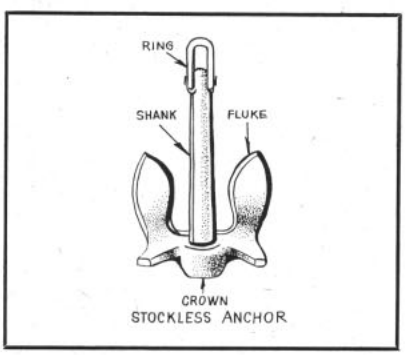
Civil War at Sea is the first of a three-volume narrative history by Virgil Carrington Jones. This concentrates on the period of the blockaders, from the day when Anderson and 128 men holed up in Fort Sumter to the first engagement of *Monitor* and *Merrimack* and the beginnings of the modern navy. On the backdrop of the over-all war, Jones presents the conflict at sea: The unsuccessful efforts to provision Fort Sumter, the Union attempt to blockade more than 3500 miles of Southern seacoast, the battle of Port Royal, and other incidents.

The Battle of the Nile, by Oliver Warner, tells of the first major reverse of the Napoleonic forces back in 1798 as another effective demonstration of sea power. As in the author's earlier *Trafalgar*, the scene is set, the circumstances under which the battle was fought are made clear, the commanders are introduced and the reader comes to know them as human beings; the action itself is described largely through eyewitness accounts of participants; and the battle's aftermath is followed through in a way that relates the particular action to the war as a whole.

King from Ashtabula by Vern Sneider offers the same light, delicate touch he demonstrated in *Teahouse of the August Moon.* Sneider tells what happens in the Nakashima Islands when the populace, after 15 years of beneficent Army rule, vote to determine their future form of government. His people are fun—and nice.

The Soldier by Richard Powell is also a novel about the Pacific, but there the resemblance ends. This story is set in the South Pacific of World War II, the tone is tense and grim, there's lots of fighting, and some of his people are not nice.

Grains of Salt—



TAFFRAIL TALK

YOU'VE ALL HEARD of cases where a speeding automobile crashed spectacularly, after ricochetting off various fixed objects, and wound up a practically demolished heap—with the lucky occupant or occupants emerging from the rubble without a scratch. Well, a certain Navy chief (who shall be nameless) tried to get his buggy started recently—and he and two would-be good samaritans wound up in the hospital. The story has a moral, of course.

Seems our hero was attempting to prime his recalcitrant vehicle by pouring gasoline into the carburetor, while his helpmate, seated behind the wheel, waited to hit the starter at a given signal. Signals, somehow, got crossed, and the better half pressed the starter early. The resultant backfire burnt the chief's right hand, and set fire to the car's motor. Friend wife, in a typically calm feminine reaction, rushed into the house in a panic.

Then things really began to come unhinged.

Gallant to the core, the chief ignored his plight long enough to ask one of several neighbor women, who had rushed to the scene, to go check on his wife. At least half a dozen of them attempted to do so all at once—and in the inevitable crush in the kitchen doorway, one of the ladies suffered a bruised back and a cut on her elbow which later required six stitches to close.

Another woman, meanwhile, cool-headedly called both an ambulance and the fire department, then reverted more to type. Rushing outside, she caught a glimpse of the damage done to the chief's hand, and promptly fainted dead away at his feet.

The ambulance arrived at this juncture, and its crew could easily have been pardoned for imagining they were in the midst of a full-fledged disaster area. They scooped up the injured trio and sped them to a hospital, where several anxious moments ensued before the woman who had fainted could be brought around. All ended well, however—none of the injuries proved to be serious, and the chief and his indomitable friends have recovered nicely.

The car's okay too. Unnoticed amid the confusion, and well in advance of the fire engine, still another neighboring housewife had marched resolutely from her home, fire extinguisher in hand, and put out the blaze under the hood—all in short order.

The moral? Well, there are several. Obviously, when handling anything inflammable, always take extra precautions. If teamwork is involved, be sure every member of the team is properly indoctrinated. Get your signals straight. And in an emergency, it pays to be calm, as well as prepared.

Three cheers for the lady with the fire extinguisher. She not only had one—but she knew how to use it!

★ ★ ★

Maybe 1961, the year that reads the same upside down, has made us mellow, but it seems to us that the quality of writing and photography of Navy journalists and photogs has improved mightily lately. Quality, we said. Quantity? Nope, we'd like to hear from more of you people who are PIOing out in the Fleet, on foreign shore and in ConUS. See our article on page 20.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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• **AT RIGHT: SUB SEEKERS—Members of antisubmarine warfare task group surround ASW carrier *USS Randolph* (CVS 15) as carrier, small boys, subs and copters pose for portrait prior to Atlantic exercises.**

Another interesting view of this sub-hunting task group is on p. 32 of this issue.

NAVY *to the north*